

Illinois Environmental Protection Agency  
Bureau of Air  
Permit Section

Responsiveness Summary for the  
Revised Clean Air Act Permit Program (CAAPP) Permit Issued to:

Illinois Power Generating Company for the  
Coffeen Power Station  
Coffeen, Illinois

on

January 18, 2017

Source I.D. No.: 135803AAA  
Permit No.: 95090009

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Attachment 1: Changes between the Draft Permit And the Issued Permit

## **A. DECISION**

On January 18, 2017, the Illinois EPA issued a revised Clean Air Act Permit Program (CAAPP) permit to Illinois Power Generating Company (IPGC) for the Coffeen Power Station (Coffeen Station or Coffeen).

## **B. BACKGROUND**

The Coffeen Station is a coal-fired electric power plant owned and operated by Illinois Power Generating Company (IPGC). The plant has two coal-fired boilers that produce steam that is then used to generate electricity. The Coffeen Station qualifies as a major source of emissions under Illinois' Clean Air Act Permit Program (CAAPP).

The CAAPP is Illinois' operating permit program for sources of emissions pursuant to Title V of the federal Clean Air Act. The CAAPP is administered by the Illinois EPA. The CAAPP generally requires that major stationary sources of emissions in Illinois apply for and obtain CAAPP permits. CAAPP permits contain conditions identifying applicable air pollution control requirements under the federal Clean Air Act (CAA) and Illinois' Environmental Protection Act (Act). Compliance procedures, including testing, monitoring, recordkeeping and reporting requirements, are also established as required or necessary to assure compliance and accomplish the purposes of the CAAPP. The conditions of a CAAPP permit are enforceable by the Illinois EPA, USEPA and the public.

The Illinois EPA issued the initial CAAPP permit for the Coffeen Station on September 29, 2005. At that time, the name of the company that owned the Coffeen Station was Ameren Energy Generating Company. It appealed this permit to the Illinois Pollution Control Board (Board), challenging a number of conditions in the permit. On November 17, 2005 the Board accepted the appeal and on February 16, 2006 the Board confirmed that this permit was stayed in its entirety by operation of law.<sup>1</sup> On September 20, 2012, the source and the Illinois EPA, with the assistance of the Office of the Illinois Attorney General, settled this appeal.<sup>2</sup> A revised CAAPP permit was subsequently issued for the Coffeen Station on October 17, 2013 following a public comment period on a draft of the revised permit.

The Illinois EPA then initiated a reopening proceeding under the CAAPP to bring this CAAPP permit up-to-date. The name of the company that owns the Coffeen Station has changed to Illinois Power Generating Company. The revised CAAPP permit that has been now been issued for Coffeen is the result of this reopening proceeding and is the final step in getting an up-to-date CAAPP permit in place for this source. Provisions have now been added in this permit to address emission control requirements that have been adopted by the USEPA and Illinois since the initial CAAPP permit was issued.<sup>3</sup> While Coffeen has been required to comply with these requirements as they took effect, the CAAPP

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<sup>1</sup> The Coffeen Station is one of many coal-fired power plants in Illinois whose initial CAAPP permits were subsequently appealed to the Board and stayed in their entirety.

<sup>2</sup> This settlement occurred in conjunction with the simultaneous release by the Illinois EPA of a draft of planned revisions to the CAAPP permit for the Coffeen Station.

Following completion of the public comment period on the draft of a revised permit, a revised CAAPP permit was subsequently issued on October 17, 2013.

<sup>3</sup> The principal "new" requirements that were added into the CAAPP permit for the Coffeen Station are applicable requirements of recently adopted USEPA rules, such as the Cross State Air Pollution Rule (CSAPR) and the Mercury and Air Toxics Standards (MATS).

permit has now been revised to include provisions addressing these requirements.

The revised permit that has now been issued also includes a number of other changes to bring the CAAPP permit for the Coffeen Station up to date. It restates the limits set by construction permits issued for projects at Coffeen since the initial CAAPP permit was issued. This revised permit also provides final approval of the Compliance Assurance Monitoring (CAM) Plan for the particulate matter (PM) emissions of the two coal-boilers at the plant.

### **C. OPPORTUNITY FOR PUBLIC COMMENTS**

The issuance of this revised permit was preceded by a public comment period in accordance with Section 39.5(8) of the Act and 35 IAC Part 252. A draft of the revised permit and the accompanying Statement of Basis prepared by the Illinois EPA were made available for review by the public at the Illinois EPA Headquarters in Springfield.<sup>4</sup> The comment period began on June 6, 2016 and ended on July 6, 2016.

The planned issuance of a revised CAAPP permit for the Coffeen Station generated a number of comments from two members of the general public, a group of environmental advocacy organizations and USEPA. The comments were helpful to the Illinois EPA in the decision-making process and these comments were fully considered by the Illinois EPA prior to issuing the revised permit.

In this Responsiveness Summary, the comments concerning specific conditions of the permit are discussed first in Section E of this document. For simplicity and clarity, these comments have been arranged in the same order as the conditions are arranged in the CAAPP permit. Comments from the source that identify errors in wording and cross-references in specific conditions of the draft permit are also included in Section E. General comments about this planned permit action that are not related to specific conditions of the permit are addressed in a separate section of the document.

### **D. AVAILABILITY OF DOCUMENTS**

Copies of this Responsiveness Summary and the revised CAAPP permit that has been issued are being made available for viewing by the public at the Illinois EPA's Headquarters at 1021 North Grand Avenue East in Springfield.

Copies are also available electronically at [www.epa.illinois.gov/public-notice](http://www.epa.illinois.gov/public-notice) and [www.epa.gov/region5/air/permits/ilonline.html](http://www.epa.gov/region5/air/permits/ilonline.html).

Printed copies of these documents are also available free of charge by calling the Illinois EPA's Toll Free Environmental Helpline, 888/372-1996, or by contacting Rachel Stewart in the Office of Community Relations.

217-782-2224 Desk line  
217-782-9143 TDD

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<sup>4</sup> Illinois EPA, *Statement of Basis for the Planned Issuance of a Revised CAAPP Permit Through Reopening and Significant Modification And a Revised Acid Rain Program Permit For: Illinois Power Generating Company, Coffeen Power Station*, June 6, 2016 (Statement of Basis).

[rachel.stewart@illinois.gov](mailto:rachel.stewart@illinois.gov)

Questions about this permit proceeding should also be directed to Ms Stewart.

**E. COMMENTS ON SPECIFIC PERMIT CONDITIONS WITH RESPONSES BY THE ILLINOIS EPA**

**I. Comment Regarding Section 2 of the Permit  
(List of Abbreviations/Acronyms Used in This Permit)**

1.     **Permit Condition:**                   2.0  
       **Related Conditions:**           6.4.7(d), 6.5.9(c) (ii) (B) and 6.4.7(a)

**Comment:**

The Draft CAAPP Permit contains undefined terms and unexplained acronyms for which a definition must be provided in order to ensure the terms are clear and enforceable, as required by Title V. See *In re Cash Creek Generation, LLC*, 2012 EPA CAA Title V Lexis 5 ("One purpose of the title V program is to 'enable the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements'" (citing 57 FR 32250 and 32251, July 21, 1992)

In particular, the term "RATA," used in Condition 6.4.7(d), is not included in Condition 2.0, "List of Abbreviations and Acronyms Used in This Permit" or otherwise defined in the permit. The term PM CPMS, used in Condition 6.5.9(c) (ii) (B), is also not addressed in Condition 2.0 or otherwise defined.

The Draft Permit also uses the term "excepted" monitoring systems in Condition 6.4.7(a). It is not clear what "excepted" monitoring systems are. If "accepted" monitoring systems was intended, the permit should be corrected. Otherwise, the Illinois EPA should explain what "excepted" monitoring systems are.

**Response:**

The terms RATA (Relative Accuracy Test Audit) and PM CPMS (Particulate Matter Continuous Parametric Monitoring System) have been added to listing of terms in in Condition 2.0.<sup>5, 6</sup>

In the draft permit, the term "excepted monitoring system" is correct. This term is used by Illinois in 35 IAC Part 225, as well as by USEPA in the Cross State Air Pollution Rule (CSAPR), as it

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<sup>5</sup> A Relative Accuracy Test Audit (RATA) involves measuring the emissions of a unit equipped with a continuous emissions monitoring system (CEMS) by testing conducted using an appropriate USEPA Reference Test Method. The monitored data is compared to the results of the testing to confirm that the CEMS meets the performance specifications that are applicable and the CEMS provides acceptable emission data.

<sup>6</sup> A Particulate Matter Continuous Parametric Monitoring System (PM CPMS) measures PM emissions as an indicator of compliance with applicable PM standard(s). A PM CPMS is not operated to meet the performance specifications for a PM CEMS. PM CPMS are typically used for emission units for which it may be not be feasible or practical to meet the performance specifications for a PM CEMS.

references provisions of the federal Acid Rain Program. This term is used to refer to certain alternative approaches to monitoring emissions that are acceptable approaches under these rules. For example, for emissions of mercury under 35 IAC Part 225, sorbent trap monitoring is an acceptable method for monitoring mercury emissions.<sup>7, 8</sup> As the term "excepted monitoring system" is used in particular rules, the meaning of the term is governed by those rules. It would not be appropriate for the permit to include a separate explanation for this term in the CAAPP permit.

## II. Comments Regarding Conditions in Section 5 of the Permit (Overall Source Conditions)

### 1. Permit Condition: 5.2.7

#### Comment:

Condition 5.2.7(a) would incorporate into the permit the Permittee's Control Measures Record dated December 12, 2013, stating that:

Any revised version of the Control Measures Record prepared by the Permittee and submitted to Illinois EPA while this permit term is in effect is automatically incorporated by reference. Upon such automatic incorporation, the revised plan replaces the version of the plan previously incorporated by reference.

As written, the draft permit would allow the Control Measures Record for material handling operations to be revised and automatically incorporated by reference into the permit without being reviewed by the Illinois EPA or offered to the public for review and comment. Thus, the source could significantly revise the control measures used to demonstrate compliance with the applicable opacity and PM limits without the opportunity for review of the revised measures.

Under Section 39.5(8) of the Act, the Illinois EPA must provide notice to the public, including an opportunity for public comment, on each significant modification to a CAAPP permit. Illinois' CAAPP further provides that "every significant change in existing

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<sup>7</sup> Sorbent trap monitoring is addressed by USEPA Reference Method 30B, *Determination of Total Vapor Phase Mercury Emissions from Coal-Fired Combustion Sources Using Carbon Sorbent Traps*.

<sup>8</sup> In 35 IAC 225.130, a "sorbent trap monitoring system" is defined as follows,

Sorbent Trap Monitoring System" means the equipment required by this Appendix B of this Part [35 IAC Part 225] for the continuous monitoring of Hg emissions, using paired sorbent traps containing iodated charcoal (IC) or other suitable reagents. This excepted monitoring system consists of a probe, the paired sorbent traps, an umbilical line, moisture removal components, an air tight sample pump, a gas flow meter, and an automated data acquisition and handling system. The monitoring system samples the stack gas at a rate proportional to the stack gas volumetric flowrate. The sampling is a batch process. Using the sample volume measured by the gas flow meter and the results of the analyses of the sorbent traps, the average mercury concentration in the stack gas for the sampling period is determined, in units of micrograms per dry standard cubic meter (µg/dscm). Mercury mass emissions for each hour in the sampling period are calculated using the average Hg concentration for that period, in conjunction with contemporaneous hourly measurements of the stack gas flow rate, corrected for the stack moisture content.

monitoring permit terms or conditions and every relaxation of reporting or recordkeeping requirements shall be considered significant." Section 39.5(14)(c)(ii) of the Act. Additionally, the federal Title V rules require all significant permit modification proceedings to provide for public notice and opportunity comment. 40 CFR 70.7(h). The source's implementation of the control measures contained in the Control Measures Record is essential to achieving and maintaining compliance with the applicable opacity and PM limits. Any substantive changes to those control measures must be processed consistent with the appropriate permit modification procedures required by state and federal law.

Therefore, the statement in Condition 5.2.7(a) that automatically incorporates any revisions made to the Control Measures Record should not be included in the permit. Any revisions made to the Control Measures Record must be submitted to the Illinois EPA for review and processed according to the appropriate permit modification procedures.

**Response:**

The approach that is being used to incorporate the Control Measures Record into the CAAPP permit by reference is based on USEPA guidance for Title V permits. This guidance recognizes that Title V permits may incorporate certain types of plans by reference provided that the "incorporation by reference" (IBR) meets certain criteria. Consistent with this guidance, the subject language of the permit was crafted to incorporate by reference certain plans into the CAAPP permit and to provide for the automatic incorporation of subsequent revisions to those plans during the term of the permit into the permit without the need for a formal revision of the permit.

In its first White Paper concerning implementation of the Title V permit program (White Paper 1),<sup>9</sup> the USEPA briefly discussed IBR. This subject was more fully discussed in its second White Paper (White Paper 2).<sup>10</sup> Together with citation and cross-referencing, IBR was recognized as an important tool for efficiently addressing applicable requirements in Title V permits.

Much of USEPA guidance regarding IBR has dealt with the need to be specific and unambiguous with the materials being incorporated [see, White Paper 2, page 40 (IBR may only be allowed "to the extent that the manner of its application is clear.")]. However, in a well-publicized letter written a couple of years after issuance of the White Papers, USEPA answered a series of questions from the State and Territorial Air Pollution Program Administrators (STAPPA), one of which squarely addressed IBR for various Startup, Shutdown and Malfunction (SSM) and Operating and Maintenance (O & M) plans (STAPPA Letter).<sup>11</sup> USEPA explained that for those plans that, by

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<sup>9</sup> Memorandum, "White Paper for Streamlined Development of Part 70 Permit Applications," from Lydia N. Wegman, Deputy Director, Office of Air Quality Planning and Standards, dated July 10, 1995 (White Paper 1).

<sup>10</sup> Memorandum, "White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program," from Lydia N. Wegman, Deputy Director, Office of Air Quality Planning and Standards, dated March 6, 1996 (White Paper 2).

<sup>11</sup> Letter, John S. Seitz, Director, Office of Air Quality Planning and Standards, USEPA, to Robert Hodanbosi and Charles Lagges, STAPPA/ALAPCO, dated May 20, 1999 (STAPPA Letter).

virtue of a statute or rule, require incorporation into a Title V permit, IBR of the plans into a Title V permit was necessary. However, USEPA noted that revisions to incorporated plans could be accomplished without formal permit revision if the permit provided that such revisions are automatically incorporated during the term of the permit.<sup>12</sup>

The STAAPA letter addressed the Startup, Shutdown and Malfunction Plans and the Operation and Maintenance Plans required of certain sources subject to NESHAPs. USEPA also observed that plans under 40 CFR Part 63 not requiring incorporation to a Title V permit "...need not be incorporated by reference, nor must their content be included as permit terms, in order to assure compliance with the relevant part 63 applicable requirements." For this reopening proceeding, the control measures record is generally akin to various plans that are not required by law or rule to be incorporated into a Title V permit. This is because the basis for requiring the development and maintenance of this record is to support Periodic Monitoring rather than to fulfill independent applicable requirements.<sup>13</sup> However, the Illinois EPA also recognized that the CAAPP permit requires the source to implement the control measures in conformance with the control measures record. For this reason, the Control Measures Record was incorporated by reference but the permit was crafted to allow for future revisions to be automatically incorporated in the manner set forth by USEPA in the STAAPA letter.<sup>14</sup> This approach is logical in the sense that the control measures are not applicable requirements *per se* and the substantive obligation to obtain prior approval from a permit authority is not present in underlying rules. Moreover, this approach maintains reasonable flexibility in the control measures used for material handling operations, consistent with the flexibility provided for by the initial permit, subject to appropriate supervision by the Illinois EPA as any revision to Control Measures Record must be provided to and therefore be available for review by the Illinois EPA.<sup>15</sup>

Notwithstanding the rationale for this initial approach in the draft revised permit, further consideration of this issue has prompted the Illinois EPA, following consultation with Coffeen, to modify the subject condition. More specifically, an exception to the broader "incorporation by reference" of the Control Measures Record is

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<sup>12</sup> USEPA reasoned that the approach was in keeping with the underlying regulations in 40 Part 63 for SSM plans "which were promulgated subsequent to part 70 and which contemplate that the source will be able to make changes to the SSM plan without the prior approval of the USEPA or the permitting authority."

<sup>13</sup> In this regard, it is noteworthy that the implementation of the control measures identified in the Control Measures Record is not essential to compliance with the applicable opacity and PM limits, contrary to the claim made in this comment.

<sup>14</sup> It should be noted that this USEPA guidance also does not require permit revisions for revisions to a Title V permit application where the application has previously been incorporated into a Title V permit by reference. See, White Paper 1 at p 23.

<sup>15</sup> To assure prompt action by the source if the Illinois EPA's review of a revised Control Measures Record identifies concerns with the revision, a condition has been added in the issued permit. New Condition 5.2.7(a) (iv) now provides that if the source submits a revised Control Measures Record to the Illinois EPA and the Illinois EPA notifies the source of any deficiency in the revised record within 30 days, the source must respond with relevant additional information or a further revision to the Control Measures Record within 30 days of the written notice of the deficiency.

created for revisions to the Control Measures Record for certain operations or processes. These four operations are: 1) Train unloading; 2) Loading coal to the storage piles (No. 4 belt discharge); 3) Wind erosion from the storage piles; and 4) Dry ash load-out. These operations were identified on the basis of their potential for emissions, as they are the only operations addressed by the Control Measures Record whose emissions could, as a practical matter, exceed applicable standards.<sup>16</sup> For such operations, changes to the Control Measures Record affecting the nature, application or frequency of the relevant control measures will not be automatically incorporated into the permit but, instead, will require an appropriate permit revision before they can be implemented and maintained. This revision addresses USEPA's apparent concern regarding the threat of certain control measures changing without the existence of adequate safeguards.<sup>17, 18</sup>

The condition in the issued permit continues to maintain reasonable flexibility in the control measures used for material handling operations, consistent with the flexibility provided for by the prior permit. In addition, the condition will ensure that any future changes to the Control Measures Record are subject to appropriate

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<sup>16</sup> The four specified operations were identified based on the information provided in the permit application for emission rates. Of the operations addressed by the Control Measures Record, these four could have emissions that cause an exceedance of an applicable standard in the absence of control measures. The emission rates of these four operations, which are not enclosed, are on the order of 5 to 10 pounds/hour. In comparison, the remaining operations are either located within buildings, underground or otherwise enclosed with maximum uncontrolled emission rates on the order of 0.5 pounds/hour or less. Additionally, it can be noted that there has not been a complaint history for nuisance dust or a history of any violations from any of the operations addressed by the Control Measures Record.

<sup>17</sup> In addition, the notion that every control measure identified in the Control Measures Record is "essential" to compliance, as advanced by the comment, is incongruous with the draft revised permit and the current record. The Illinois EPA has not historically treated the various control measures as necessary to assure compliance with applicable opacity or particulate matter standards. As explained repeatedly in other permit proceedings involving the CAAPP permits for coal-fired power plants, the initial CAAPP permit for this source has only required the use of the Control Records Measure "to support periodic monitoring."

<sup>18</sup> At least part of USEPA's concern on this issue may be the result of some confusion regarding the use of incorporation by reference for the Control Measures Record. Although the Control Measures Record is newly-incorporated and is enforceable under the CAAPP permit, that is not to say that the record's independent existence has been rendered obsolete or subordinated to the permitting procedures of the CAAPP. This is because incorporation by reference merely operates to make the object of the incorporation a part of a subject document. It does not affect the origin of, or any subsequent change in, the object so incorporated. For example, a state or federal rule can be incorporated into a Title V permit and thereafter may be enforced as a permit requirement. But what the rule requires, and the manner by which rule can be amended, is outside of the purview of Title V program, as regulations can only be revised through formal rulemaking or action by a court. The Control Measures Record required by this permit is similarly situated. Changes to the Control Measures Record remain at the election of Coffeen, not the Illinois EPA, USEPA or the public. If the approach to incorporation by reference cannot not be accomplished automatically, as set forth in the draft revised permit, the only alternative is to compel the source to seek permit revision to incorporate an amended version of the Control Measures Record into the permit. As described above, the modified condition will require the source to seek a permit revision to incorporate by reference any changes to the Control Measures Record involving the four specified operations. Depending upon the nature of the change, the revision would follow the applicable procedures for administrative amendment, minor modification or significant modification.



supervision by the Illinois EPA, as any such revision must be provided to and therefore be available for review by the Illinois EPA.<sup>19</sup>

Incidentally, Condition 7.5.9(b) is not yet referenced in Condition 5.2.7 because IPGC has not yet submitted the revised Control Measures Record that would address limestone handling operations. IPGC has 60 days from the effectiveness of the revised permit to submit the Control Measures Record for these operations addressed by Section 7.5 of the permit. Likewise, Condition 7.5.6(a) (ii) does not refer back to Condition 5.2.7. These changes are planned in the future when the permit is renewed or modified.

**III. Comments Regarding Conditions in Sections 6.1 and 6.2 of the Permit**  
**(Section 6.1 - Acid Rain Program)**  
**(Section 6.2 - Cross State Air Pollution Rule/Transport Rule (CSAPR/TR))**

1.     **Permit Sections:**                   6.1 and 6.2  
       **Related Conditions:**       6.2.2(a) (i), (b) (i) and (c) (i), 6.2.3(a),  
   6.2.4, 6.2.5(a), (b) and (d)

**Introduction:**

USEPA has identified several concerns with Sections 6.1 and 6.2 of the draft permit, "Cross-State Air Pollution (CSAPR)/Transport Rule (TR) Trading Programs". These relate primarily to areas where the Illinois EPA has not used the language contained in USEPA's May 13, 2015 guidance document entitled "Title V Permit Guidance and Template for the Cross-State Air Pollution Rule," or has deviated from the language of the rule. USEPA developed this guidance in order to assist states in incorporating applicable TR requirements into Title V permits. The guidance includes a template that can be completed and inserted into a Title permit in order to ensure that the TR requirements are completely and correctly incorporated. USEPA strongly encourages states to use the template. While state authorities are not required to use the template, it does provide the minimum applicable TR requirements that must be included in a Title V permit. Our specific comments on Sections 6.1 and 6.2 of the draft permit are as follows:

**a.     Comment:**

In Sections 6.1 and 6.2 of the draft permit, the Illinois EPA has replaced the term "owners and operators" in the TR rule with "permittee." For sources subject to CSAPR, there may be multiple owners and operators that are not necessarily the permittee. The term "owners and operators" is consistent with the language of the rule in 40 CFR Part 97, and will ensure that the appropriate responsible parties are included in the event of any future changes in ownership of this plant. The Illinois EPA should replace the term "permittee" with "owners and operators" throughout these sections.

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<sup>19</sup> To assure prompt action by the source if the Illinois EPA's review of a revised Control Measures Record identifies concerns with the revision, a condition has been added in the issued permit. New Condition 5.2.7(a) (iv) now provides that if the source submits a revised Control Measures Record to the Illinois EPA and the Illinois EPA notifies the source of any deficiency in the revised record within 30 days, the source must respond with relevant additional information or a further revision to the Control Measures Record within 30 days of the written notice of the deficiency.

**Response:**

Throughout Sections 6.1 and 6.2 in the issued permit, the Illinois EPA has replaced the term "Permittee" with the regulatory terms "Owners and Operators" or "Owners or Operators" consistent with the regulatory language.

**b. Comment:**

The template provided by USEPA in its May 13, 2015, guidance was structured to provide flexibility for sources subject to CSAPR. By providing the table outlining the multiple monitoring system options, the structure of the template allows for the use of the minor permit modification procedures under Title V if a source chooses to request an alternative monitoring system. While the Illinois EPA is not required to use the template, the structure of Section 6.2 will require a significant modification to the permit to address any future changes in the selected monitoring systems. This would likely result in a conflict between the approved monitoring system under CSAPR and the permit while a significant modification to the CAAPP permit is being processed. The source will be expected to comply with the requirements of both the approved monitoring and the requirements of the permit.

**Response:**

The Illinois EPA has not included this language in the permit following consultation with IPG. It indicated that this type of flexibility is not necessary for the EGUs at Coffeen. In addition, changes to monitoring systems for NO<sub>x</sub> and SO<sub>2</sub> emissions are likely not possible because of the separate requirements for monitoring under 40 CFR Part 75 of the Acid Rain Program.

**c. Comment:**

Draft Condition 6.2.3(a) would require the source to submit a monitoring plan to the USEPA Administrator. This language is similar to the language in paragraph 2 of the "Description of TR Monitoring Provisions" in the template. However, the Illinois EPA has not included the link to USEPA's website where the monitoring plans can be found. This link should be included to ensure that any interested party knows where to find that information.

**Response:**

The Illinois EPA disagrees that including the address of the website in the permit would ensure that interested parties knows where to find these plans. However, the "current" website address where these documents can be found is as follows:

<http://www.epa.gov/airmarkets/emissions/monitoringplans.html>

There are difficulties with the change to the permit requested by this comment, as discussed below. Accordingly, the Illinois EPA is not making the requested change. However, the Illinois EPA does plan to include the address of the relevant USEPA website in future Statements of Basis for sources that are subject to CSAPR.

- The placement of information on this USEPA website is not an applicable requirement on the Permittee. Should the USEPA not post the documents to their website for whatever reason, the Permittee has no ability to make USEPA post those documents. Moreover,

including the address in the permit would require the Permittee to certify compliance for this action that USEPA has voluntarily entered into, i.e., the posting of certain documents that it receives on a website.

- The USEPA may change or update the website so that the specified link becomes obsolete and no longer works.<sup>20</sup> In such circumstances, including a website address in the permit would not benefit interested parties. In addition, if the website link becomes obsolete the Permittee would need to submit an application for a revision to the permit to keep it current and the Illinois EPA would have to process a trivial revision.

**d. Comment:**

In Conditions 6.2.2(a)(i), 6.2.2(b)(i), 6.2.2(c)(i), 6.2.5(a), and 6.2.5(b), the Illinois EPA has used the term "affected unit" instead of "TR NOx Annual Unit," "TR NOx Ozone Season Unit," or "TR SO2 Group 1 Unit." The term "affected unit" is not defined in 40 CFR Part 97. The Illinois EPA should use the appropriate term from 40 CFR Part 97 in each condition.

**Response:**

The Illinois EPA has addressed the use of the terminology "affected units" throughout Section 6.2 as requested by this comment. The issued permit refers to the specific "TR NOx Annual units," "TR NOx Ozone Season units" and "TR SO2 Group 1 units" at the Coffeen Station which are the two coal boilers, CB-1 and CB-2. Additionally, the Illinois EPA has provided further clarification of the affected source being defined as a "TR NOx Annual source Trading Program," the "TR NOx Ozone Season source" Trading Program, and the "TR SO2 Group 1 source" consistent with the regulatory terminology.

**e. Comment:**

The language of Condition 6.2.4 concerning delegated representative deviates from the language of the TR at 40 CFR 97.406(a), 97.506(a) and 97.606(a). USEPA requests that the Illinois EPA use the language of the rule.

**Response:**

As requested by this comment, Condition 6.2.4 in the issued permit uses the relevant regulatory language from 40 CFR 97.406(a), 97.506(a) and 97.606(a).

- f. It appears that the language in Condition 6.2.5(d) is intended to meet the requirements of 40 CFR 97.406(g), 97.506(g), and 97.606(g). If so, the language in the draft permits deviates from the language in the rule. If the intent of Condition 6.2.5(d) was to address these requirements, please revise the condition to include the rule language. If Condition 6.2.5(d) was not meant to address these requirements, please add the appropriate requirements of the TR.

**Response:**

In response to this comment, the issued permit includes an additional condition at the end of Section 6.2, Condition 6.2.6,

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<sup>20</sup> The Illinois EPA's experience is that USEPA periodically reworks its websites establishing new links to information and making the former links obsolete.

which addresses the relevant requirements of the TR addressed by this comment. A new condition was added because Condition 6.2.5(d) is not intended to address 40 CFR 97.406, 97.506 and 97.606. Rather, Condition 6.2.5(d) addresses Section 39.5(7)(h) of the Illinois Environmental Protection Act (Act) as a requirement of the CAAPP.

g. Comment:

Several provisions of the TR that USEPA considers to be minimum requirements for a Title V permit are not included in Draft Section 6.2. To ensure the CAAPP permit includes the minimum requirements, USEPA requests that the following provisions be included in Section 6.2 of the permit. From the "Description of TR Monitoring Provisions" section of the template:

40 CFR 97.406 (d)(1) and (e), 40 CFR 97.506 (d)(1) and (e), and 40 CFR 97.606 (d)(1) and (e).

Response:

The Illinois EPA has included the appropriate references as requested by the comment in Conditions 6.2.3(b), (c) and (d) as well as the addition of Condition 6.2.5(e).

**IV. Comments Regarding Conditions in Section 6.4 of the Permit  
(Control of Mercury Emissions from Coal-fired Electric Generating Units  
(35 IAC 225 Subpart B))**

**1. Permit Condition: 6.4.3**

Comment:

Draft Condition 6.4.3 refers to the "E. D. Edwards" Power Station. The correct name for this plant is the "Edwards" Power Station. Please delete "E. D."

Response:

The Illinois EPA has made this correction.

**2. Permit Conditions: 6.4.7(b) and (c) and 6.4.8  
Related Conditions: 6.4.4(c), 7.1.8(b) and 7.1.9(e)**

Comment:

- a. The conditions of the permit that purportedly "address" compliance with Draft Condition 6.4.4(c) do not assure compliance. Draft Condition 6.4.8 states that "Compliance with the SO<sub>2</sub> emission limit of Condition 6.4.4(c) is addressed by continuous emission monitoring in accordance with Condition 7.1.8(b) and recordkeeping required by Condition 7.1.9(e)." Condition 7.1.8(b) mandates the use of SO<sub>2</sub> continuous emission monitoring systems (CEMS) on the coal boilers. Condition 7.1.9(e), titled "Records for Continuous SO<sub>2</sub> Monitoring Systems," requires IPGC to keep various records of SO<sub>2</sub> emissions from the CEMS, as well as records addressing operation of these CEMS. These conditions do not require the gathering of the information necessary to determine whether the WFGD systems at Coffeen operate to achieve a 98 percent SO<sub>2</sub> removal rate each year at Coffeen and Duck Creek. The CEMS only measure the SO<sub>2</sub> emissions of the boilers. They do not show Coffeen's "uncontrolled" SO<sub>2</sub> emissions disregarding the control provided by the WFGDs, much less

the uncontrolled SO<sub>2</sub> emissions of both Coffeen and Duck Creek combined. These CEMS also do not otherwise address the removal efficiency of the WFGDs.

No other conditions assure compliance with Condition 6.4.4(c)(ii). In particular, the "certification of compliance" and the "deviation reports" required by Conditions 6.4.7(b) and (c) do not provide such assurance. Those requirements, which are identified as "state only," merely require that IPGC inform the Illinois EPA that they have complied with, or not complied with 35 IAC Part 225 (which includes the MPS). But a statement by the source that it has or has not complied with the required conditions falls short of providing the type of verifiable compliance assurance that Title V requires. A certification provides no mechanism to verify the truth of its statements, and taking a company at its word does not pass muster.<sup>21</sup>

Rather than relying on certifications of compliance standing alone, Title V of the CAA unequivocally requires emissions monitoring sufficient to establish compliance with applicable requirements. See, e.g., NRDC v. EPA, 194 F.3d 130, 136 (D.C. Cir. 1999) (concluding that the "bottom line" of Title V implementing regulations is that "a major source must undertake "'monitoring ... sufficient to assure compliance'"); 40 CFR 70.6(a)(3)(i)(B); 40 CFR 70.6(c)(1). In In the Matter of Midwest Generation, LCC, Waukegan Generating Station, USEPA explained that Title V regulations require that:

...where the applicable requirement does not require periodic testing or instrumental or non-instrumental monitoring..., each title V permit must contain Periodic Monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit...Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. 2005 EPA CAA Title V LEXIS 14, \*44-45 (Sep. 22, 2005) (internal quotations omitted).

In short, because the Draft Permit would lack adequate monitoring and recordkeeping requirements to ensure compliance with Condition 6.4.4(c)(ii), it would not assure compliance with all applicable requirements and therefore does not comport with Title V of the CAA. This permit should include federally-enforceable monitoring and other recordkeeping provisions that assure compliance with the 98 percent SO<sub>2</sub> removal efficiency requirement in Condition 6.4.4(c)(ii).

**Response:**

**The requirement for the combined control efficiency of the WFGDs at the Duck Creek and Coffeen Stations, as addressed in Draft Condition 6.4.4(c), is no longer applicable and is not included in the revised permit. It was not a requirement of 35 IAC Part 225. Rather, it was**

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<sup>21</sup> See, e.g., Volkswagen's vehicle emission testing fraud, described in detail by the New York Times.

a condition of a Variance issued by the Illinois Pollution Control Board (Board) to IPGC's parent company (Illinois Power Holdings or IPH) on November 21, 2013 (PCB 14-10). This Variance provided temporary relief from the fleet-wide limitation for SO<sub>2</sub> under the Multi-Pollutant Standards (MPS), 35 IAC 225.233(e)(3)(C)(iii) and (iv). On October 27, 2016, during the time between the close of the public comment period and the issuance of this revised permit, the Board terminated this Variance. This action was taken in response to a motion filed by IPH on September 2, 2016, in which it stated that the relief provided by the Variance was no longer needed. Accordingly, the conditions of this Variance, including Draft Condition 6.4.4(c), have not been included in the issued permit. As this comment relates to a condition of the Variance, which has now been terminated, the comment is no longer relevant.

In response to this comment, the Illinois EPA also did review the Periodic Monitoring for the applicable limitations for NO<sub>x</sub> and SO<sub>2</sub> under the MPS pursuant to 35 IAC Part 225. The issued permit does include appropriate monitoring, recordkeeping and reporting requirements to address the limitations of the MPS that are now applicable. For this purpose, additional reporting requirements have been included in new Condition 6.4.7(b) in the issued permit to directly address compliance with these limitations.<sup>22</sup>

- b. One of the applicable requirements for the coal-boilers at Coffeen is the CAA's requirement for Best Available Retrofit Technology (BART).<sup>23</sup> On July 6, 2012, USEPA approved Illinois' Regional Haze SIP, including Illinois' proposal that portions of the state's Multi-Pollutant Standard (MPS), at 35 IAC 225.233(e)(3)(C), serve as BART for certain emission units. See Approval and Promulgation of Air Quality Implementation Plans; Illinois; Regional Haze, (77 FR 39943, July 6, 2012). The MPS provisions in the SIP require, among other things, that the fleet of EGUs then owned and operated by Ameren achieve an SO<sub>2</sub> emission rate of 0.50 lb/million Btu (mmBtu) through calendar year 2013, 0.43 lb/mmBtu in 2014, 0.25 lb/mmBtu in 2015 and 2016 and 0.23 lb/mmBtu in 2017 and thereafter, averaged across that fleet.

In 2013, IPH sought a variance from those SO<sub>2</sub> requirements, which variance was granted by the Board on November 21, 2013. In its order, the Board provided, among other things, that "[t]hrough December 31, 2019, IPGC must operate the existing Wet Flue Gas Desulfurization (WFGD) or scrubber systems at the Duck Creek and Coffeen Energy Centers to achieve a combined SO<sub>2</sub> removal rate of at

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<sup>22</sup> The necessary monitoring and recordkeeping to address these limitations were already fully addressed in Conditions 7.1.8 and 7.1.9 of the draft permit.

<sup>23</sup> BART is one component of the CAA's visibility program, which was added to the CAA in 1977 to "...[prevent] any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution.", CAA Section 169A(a)(1). As part of that program, Congress mandated that USEPA adopt regulations requiring states to develop State Implementation Plans (SIPs) containing measures necessary to make reasonable progress toward the national goal of improving visibility, including installation and operation of BART at BART-eligible sources that could be reasonably anticipated to cause or contribute to visibility impairment. Sections 169A(a)(4) and (b)(2)(A) of the CAA.

least 98 percent on a calendar year annual average basis.” (Order, PCB 14-10, Nov. 21, 2013, at 103.) The Illinois EPA subsequently sought USEPA’s approval to modify the state’s Regional Haze SIP to reflect the changes to the MPS adopted by the Board in that variance proceeding. On December 21, 2015, USEPA approved that modification and incorporated the Board’s November 21, 2013 Order in PCB 14-10 into the SIP. Air Quality Implementation Plan Approval; Illinois; Illinois Power Holdings and Ameren Energy Medina Valley Cogen Variance, 80 FR 79261, 79266 (Dec. 21, 2015). Therefore, the Board’s mandate that IPGC operate the scrubbers at Duck Creek and Coffeen to “achieve a combined SO<sub>2</sub> removal rate of at least 98 percent on a calendar year annual average basis” is part of Illinois’ Regional Haze SIP and an “applicable requirement” under Title V of the CAA.

Draft Condition 6.4.4(c)(ii) would properly reiterate the federal SIP-based requirement that: “Through Dec. 31, 2019, the Permittee shall operate the WFGD systems at the Coffeen Power Station as needed to achieve a combined SO<sub>2</sub> removal rate for the EGUs at Duck Creek and Coffeen Power Stations of at least 98 percent on a calendar annual average basis.” However, the draft permit would not ensure compliance with that requirement. The permit conditions for emissions monitoring and reporting that purportedly demonstrate compliance with Condition 6.4.4(c)(ii), i.e., Condition 7.1.8(b) and 7.1.9(e), do not address this requirement and no other condition address whether the WFGDs on the EGUs at Coffeen are operated to comply with this requirement.

**Response:**

**As already discussed, this comment is no longer relevant. The source no longer has relief from the regulatory provisions in 35 IAC 225.233(e) (3) (C) because this Variance has been terminated.**

**V. Comments Regarding Conditions in Section 6.5 of the Permit (Mercury and Air Toxics Standard (MATS) Rule)**

**1. Permit Condition: 6.5.3(d)**

**Comment:**

Condition 6.5.3(d) of the Draft Permit states:

Pursuant to 40 CFR 63.10000(b), at all times the Permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Illinois EPA which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Although the Draft Permit explains what criteria might be used to ascertain whether operation of an affected source is being operated in a manner consistent with safety and good air pollution control practices for minimizing emissions, it should delineate exactly how

this determination will be made. The Illinois EPA needs to be transparent with the public about how it plans to evaluate whether this requirement is being met.<sup>24</sup>

**Response:**

"General duty" provisions of relevant rules, such as 40 CFR 63.10000(b), are not appropriate for further elaboration or explanation in a CAAPP permit, as is requested by this comment. It is also not appropriate for the CAAPP permit to specify how the Illinois EPA will determine whether it considers the source to have fulfilled the obligations set forth in such provisions. The function of CAAPP permits is to set forth requirements and obligations that apply to sources, not to the Illinois EPA, the USEPA or other interested entities.<sup>25</sup> Accordingly, Condition 6.5.3(d) is proper as it reiterates the regulatory obligations established by 40 CFR 63.10000(b).

2.     **Permit Condition:**                   6.5.4(a)(ii)  
       **Related Conditions:**           6.5.4(a)(iv)(B) and 6.5.7(c) and (d)

a.     **Comment:**

The Draft Permit indicates that the units will have mercury continuous emissions monitoring systems (mercury CEMS). See Draft Condition 6.5.4(a)(iv)(B), Applicable Monitoring and Testing Requirements ("the Permittee uses a continuous monitoring system to monitor emissions of mercury and SO<sub>2</sub>"). Yet, despite the fact that the Permittee already uses mercury CEMS, the Draft Permit's monitoring provisions do not require the use of mercury CEMS. "The Permittee shall monitor emissions of mercury from affected EGUs using a sorbent trap monitoring system in accordance with 40 CFR 63.10010(g), 40 CFR 63.10020(a) through (d), and Appendix A to 40 CFR Part 63 Subpart UUUUU." Draft Condition 6.5.4(a)(ii).

Further, even though the monitoring provisions do not actually require mercury emissions monitoring using the mercury CEMS, the Permit still contains reporting requirements that apply to the CEMS. "The Permittee shall comply with the reporting requirements for mercury CEMS and sorbent trap monitoring systems specified at Sections 7.2.1 through 7.2.4 of Appendix A to 40 CFR Part 63 Subpart UUUUU." Draft Condition 6.5.7(d). "Pursuant to Section 7.2.5 of Appendix A to 40 CFR Part 63 Subpart UUUUU, the Permittee shall submit mercury CEMS and sorbent trap monitoring system data quarterly..." Draft Condition 6.5.7(e). "[T]he Permittee shall submit reports of performance tests and CEMS performance evaluations

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<sup>24</sup> It is also noteworthy, as related to certain other comments, that 40 CFR 63.10000(b) provides an example of a USEPA rule that requires a subject source to "minimize" emissions. This obligation is subject to the further qualification that the actions that are required to minimize emissions must be consistent with safety or good air pollution control practice.

<sup>25</sup> As a general matter, the Illinois EPA would use its expertise and experience to determine whether the source has met the general obligations established in 40 CFR 63.1000(b). This would most commonly be expected to occur in relation to exceedance(s). In an enforcement action for exceedance(s) of an emission standard in the MATS rule, in addition to violation(s) of that standard, a "second" violation involving 40 CFR 63.10000(b) could also be alleged if the exceedance(s) appears to be the result of inadequate maintenance or poor operating practices by the source.



required by 40 CFR Part 63 Subpart UUUUU ...." Draft Condition 6.5.7(c).

It is not clear why the Illinois EPA has chosen to ignore the installed CEMS, but importantly, even though sorbent trap monitoring can be helpful in addition to CEMS to capture multiple species of mercury (beyond gaseous mercury, which is registered by CEMS), CEMS provide more consistent data evaluating daily and hourly performance. Thus, we cannot discern any reason not to require reporting of CEMS data on top of the plant's mercury sorbent trap monitoring given that mercury CEMS are already installed and available at the plant and the Draft Permit already contains reporting requirements that apply to the mercury CEMS. In addition to calling for mercury sorbent trap monitoring, the Permit should require mercury CEMS to monitor mercury emissions at the Plant; or in the alternative, the plant should be required to run sorbent traps sufficiently often to get the strong hourly mercury emissions data that would be achieved through a CEMS.

**Response:**

The comment incorrectly suggests that there are two different types of monitoring systems for mercury emissions at the plant, i.e., mercury CEMS and sorbent trap monitoring systems for mercury. However, only sorbent trap monitoring systems are used. Sorbent trap monitoring systems are a type of continuous monitor system for mercury emissions. In this regard, Condition 6.5.4(iv) (B) indicates that the source uses continuous monitoring systems for mercury. This condition does not indicate that the source uses continuous emissions monitoring systems (CEMS) for mercury.

As observed by the comment, a sorbent trap system does not provide hour by hour emission data like a "conventional" mercury CEMS. However, sorbent trap systems for mercury are subject to Quality Assurance and Quality Control requirements for reliability of collected emissions data. While sorbent traps measure mercury emissions over longer periods of time than CEMS, they are an acceptable method of monitoring mercury emissions under both the MATS rule and Illinois' rules at 35 IAC Part 225.

A CAAPP permit must include monitoring necessary to assure compliance with applicable requirements. The comment does not identify any applicable rule that requires the use of a mercury CEMS rather than a sorbent trap system to demonstrate compliance with the applicable emission standards for mercury. Indeed, the comment acknowledges that the relevant rules do not mandate the use of CEMS and provides for an alternative method of monitoring, i.e., sorbent trap systems. The comment also has not demonstrated that mercury CEMS, with emission data collected on an hour by hour basis, is essential to demonstrate compliance with the applicable limits for mercury. (Again, the comment acknowledges that sorbent traps are an acceptable approach for monitoring mercury emissions). As such, the comment does not show that use of a mercury CEMS is an applicable requirement or is otherwise needed to assure compliance with an applicable standard or limit.

**b. Comment:**

Please ensure that monitoring for this power station is greatly improved. This includes concerns about mercury pollution and provisions for the monitoring of mercury that must require mercury CEMS in the permit.

**Response:**

As already discussed, this CAAPP permit appropriately addresses current requirements for monitoring of emissions, including monitoring for emissions of mercury. It is not appropriate for this permit to require mercury CEMS. Sorbent traps are a reliable and accurate means to measure mercury emission that is specifically allowed to be used by the applicable regulations that address mercury emissions.

**3. Permit Condition: 6.5.7(a) (i)**

**Comment:**

Draft Condition 6.5.7(a) (i) would provide that IPGC must provide test notifications pursuant to 40 CFR 63.7(b), 40 CFR 63.9(e) and 63.10030(d) at least 30 days prior to the start of test. However, 40 CFR 63.7(b) (1) and 63.9(e) require a source to provide notification at least 60 days prior to the commencement of the relevant tests. Thus, the 30-day advance notice requirement in Condition 6.5.7(a) (i) contradicts federal law. Earlier notification will ensure that the Illinois EPA has adequate time to conduct appropriate review of the site-specific test plans before they are approved. This error should be corrected in the issued permit.

**Response:**

As originally adopted, 40 CFR 63.7(b) (1) would suggest a 60 day advance notification is required for performance tests under the MATS rule. However, this conflicts with the 30 day notification requirement in 40 CFR 63.10030. In recent technical corrections to the MATS rule, the USEPA corrected this error, revising Table 9 of 40 CFR 63 Subpart UUUUU, which addresses the applicability of the requirements 40 CFR Subpart A for sources subject to the MATS rule. The MATS rule now provides that 40 CR 63.7(e) (1) is not applicable for purposes of the MATS rule. Rather 40 CFR 63.9 is applicable, except for the provision for 60-day advance notification prior to conducting a performance test in 40 CFR 63.9(e). Instead, the 30-day notification period per 40 CFR 63.10030(d) applies. [81 FR 20174 and 20202, April 6, 2016]

**4. Permit Condition: 6.5.7(d)**

**Comment:**

In Condition 6.5.7(d), for clarity, please revise as follows: "The Permittee shall comply with any applicable reporting requirements for mercury CEMS and sorbent trap monitoring systems specified at Sections 7.2.1 through 7.2.4 of Appendix A to 40 CFR Part 63 Subpart UUUUU."

**Response:**

The Illinois EPA has added the phrase "any applicable" as requested. As this condition generally refers to reporting requirements in Appendix A to 40 CFR 63 Subpart UUUUU, it is appropriate that the only reporting requires by this condition is the reporting that is

actually required by or "applicable" pursuant to Appendix A. Similar changes have been made to other conditions, as discussed below.

5. Permit Condition: 6.5.7(e)

**Comment:**

In Condition 6.5.7(e), for clarity, please revise as follows: "Pursuant to Section 7.2.5 of Appendix A to 40 CFR Part 63 Subpart UUUUU, the Permittee shall submit any required mercury CEMS and sorbent trap monitoring system data quarterly within 30 days after the end of each calendar quarter, using the ECMPs Client Tool."

**Response:**

The Illinois EPA has added the phrase "any required" as requested.

6. Permit Condition: 6.5.7(f)

**Comment:**

In Condition 6.5.7(f), for clarity, please revise as follows: "The Permittee shall comply with any applicable reporting requirements for HCl CEMS specified at Sections 11.1 through 11.4 of Appendix B to 40 CFR Part 63 Subpart UUUUU."

**Response:**

The Illinois EPA has also added the phrase "any applicable" as requested by the comment.

7. Permit Condition: 6.5.7(g)

**Comment:**

In Condition 6.5.7(g), for clarity, please revise as follows: "Pursuant to Section 11.5 of Appendix B to 40 CFR Part 63 Subpart UUUUU, the Permittee shall submit any required HCl CEMS data quarterly within 30 days after the end of each calendar quarter, using the ECMPs Client Tool."

**Response:**

The Illinois EPA has added the phrase "any required" as requested by this comment.

8. Permit Condition: 6.5.9(e)

**Comment:**

Condition 6.5.9(e) incorrectly refers to Condition 6.5.4(a)(ii)(A), which does not exist. The correct reference is to Condition 6.5.4(a)(ii).

**Response:**

This cross-reference has been corrected as requested by this comment.

## VI. Comments Regarding Conditions in Section 7.1 of the Permit

(Coal-Fired Boilers)

1.     **Permit Conditions:**           7.1.3(b)  
       **Related Conditions:**       7.1.3(c) , 7.2.3(b) and 7.3.3(b)

**Comment:**

The reopening of this permit comes after the *NRDC v. EPA* decision and after USEPA's issuance of a rule invalidating all SSM affirmative defenses in state SIPs. Nonetheless, this Draft Permit still contains provisions that violate USEPA's updated SSM requirements in three key ways. First, Condition 7.1.3(c) (and 7.2.3(b), 7.3.3(b), etc.) grants IPGC the authority to continue operating certain operations at the Coffeen Plant during periods of malfunction despite emissions exceedances, and provides a corresponding affirmative defense to injunctive relief for exceedances during those periods. Pursuant to *Nat. Res. Def. Council*, 749 F.3d at 1063, and USEPA's new SSM rule, this condition is not permissible under the Clean Air Act and the Illinois EPA should therefore remove it from the Permit.

Second, contrary to USEPA's new SSM rule, Condition 7.1.3(b) of the Draft Permit creates a complete bar to enforcement of exceedances during periods of startup, granting IPGC authority to exceed its emission limits during startup of the facility. This condition should also be removed from the Coffeen Plant's Permit.

Finally, even assuming an affirmative defense to penalties were lawful (it is not, as discussed), the permit runs contrary to published USEPA criteria for determining when a facility may be eligible for an affirmative defense to statutory penalties. USEPA has published recommended criteria delineating when a facility may qualify for an affirmative defense to statutory penalties. See Steven A. Herman & Robert Perciasepe, USEPA, *State Implementation Plans: Policy regarding Excess Emissions during Malfunctions, Startup, and Shutdown* (hereinafter "USEPA 1999 Policy"), at 3-4 (Sep. 20, 1999) Those criteria include a test to determine if an event qualifies as a malfunction, which provides that malfunctions must not be part of a pattern or stem from an avoidable event, and must be resolved as quickly as possible while minimizing impacts on air emissions. *Id.* USEPA also provides that excess emissions during startup must not be part of a pattern or stem from an avoidable event. *Id.* at 5-6. The Draft Permit deviates significantly from these criteria, opening up the possibility that the Plant might be improperly granted an affirmative defense. For instance, the Draft Permit authorizes continued operation of both the coal-fired boilers and coal handling equipment during malfunctions where "necessary to provide essential service or to prevent injury to personnel or severe damage to equipment." See Condition 7.1.3(c) (i) and 7.2.3(b) (i). The Draft Permit includes no provision requiring that malfunctions not be part of a pattern or stem from an avoidable event, or that they be resolved as quickly as possible while minimizing impacts on air emissions. Similarly, the Draft Permit's authorization to exceed emission limits during startup requires only that the applicant take "all reasonable efforts... to minimize startup emissions, duration of individual startups and frequency of startups." See Condition 7.1.3(b) (i). Nowhere does the Draft Permit require that any exceedances during startup not be part of a pattern or stem from an avoidable event.

Although the Draft Permit mimics provisions in Illinois's existing SSM SIP, in its proposed SSM SIP Call Rule, USEPA has found that Illinois's SSM provisions are inconsistent with the Clean Air Act:

The USEPA believes that the inclusion of the complete bar to liability, including injunctive relief, the availability of the defense for violations during startup and shutdown, the burden-shifting effect, and the insufficiently robust qualifying criteria in Ill. Admin. Code tit. 35 Sec. 201.261, Ill. Admin. Code tit. 35 Sec. 201.262, and Ill. Admin. Code tit. 35 Sec. 201.265, are substantial inadequacies and render these specific SIP provisions impermissible.  
78 FR 12514-15.

Furthermore, USEPA subsequently re-drafted its proposed SIP Call rule to be consistent with *Nat. Res. Def. Council*, issuing a supplemental notice of proposed rulemaking that explicitly held that any defenses for emission exceedances during SSM events is unlawful:

[The Illinois SIP] create[s] an impermissible affirmative defense for violations of SIP emission limits. These provisions would operate together to limit the jurisdiction of the federal court in an enforcement action and to preclude both liability and any form of judicial relief contemplated in CAA sections 113 and 304.  
*State Implementation Plans: Response to Petition for Rulemaking; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction; Supplemental Proposal to Address Affirmative Defense Provisions in States Included in the Petition for Rulemaking and in Additional States: Proposed Rule*, (79 FR 55920, Sept. 17, 2014).

On May 22, 2015, USEPA finalized these changes, revising its guidance to make clear that affirmative defense provisions are not permissible in SIPs; and issuing SIP calls directing 23 statewide and local jurisdictions, including Illinois, to remove affirmative defense provisions from their SIPs. *USEPA, State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction* (May 25, 2015).

As such, in order to ensure that this CAAPP permit remains consistent with Clean Air Act requirements, the Draft Permit must be revised to allow the public to hold IPGC directly accountable any time the facility emits large amounts of excess emissions, including periods of SSM.<sup>26</sup>

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<sup>26</sup> In any event, the draft permit should clarify that any finding by Illinois EPA that emission exceedances qualify for a variance under the permit's SSM provisions does not preclude either a USEPA enforcement action or a citizen suit pursuant to the CAA, for the reasons given above.

Response:

The comment does not support the changes to the CAAPP permit for the Coffeen Station that it recommends. As observed by this comment, the appropriate approach to SSM events for SIP emission limitations is a subject that USEPA has addressed in its SSM Rule or "SIP Call." Provisions of approved SIPs are not directly altered by the SIP call. USEPA clearly recognized this provision in the SIP case stating:

When the EPA issues a final SIP call to a state, that action alone does not cause any automatic change in the legal status of the existing affected provision(s) in the SIP. During the time that the state takes to develop a SIP revision in response to the SIP call and the time that the EPA takes to evaluate and act upon the resulting SIP submission from the state pursuant to CAA section 110(k), the existing affected SIP provision(s) will remain in place. 80 FR 33840 (June 12, 2015)

The SIP Call requires appropriate rulemaking by affected states and jurisdictions, not source-by-source actions during permitting. In this regard, as discussed in this comment, USEPA has reconsidered the provisions that address the potential for "excess emissions" during SSM in the SIPs of a number of states and local jurisdictions, including Illinois' SIP. USEPA has now found that many of these existing SIP provisions, including the relevant provisions of Illinois rules dealing with startup and malfunction and breakdown events, which USEPA had previously approved, are inconsistent with provisions of the CAA.<sup>27</sup> Accordingly, USEPA has issued the SIP Call, which requires those affected states and local

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<sup>27</sup> Illinois' SIP, as codified at 35 IAC 201.149, prohibits startup (S) of an emission unit or continued operation of an emission unit during malfunction or breakdown (MB) if such operation would cause a violation of an applicable state emission standard absent express permit authorization. 35 IAC 201 Subpart I sets forth a two-step process for addressing compliance with state emission standards during SMB. The first step consists of obtaining authorization by means of a permit application to make a future claim of SMB. The second step involves making a viable claim of SMB. For startup, this consists of showing that all reasonable efforts have been made to minimize emissions from the startup event, to minimize the duration of the event, and to minimize the frequency of such an event. For MB, this consists of showing that continued operation was necessary to prevent injury to persons or severe damage to equipment, or was required to provide essential services. Inherent in this showing is the obligation to show that operation with excess emissions occurred only to the extent necessary.

Ameren Energy Generating Company sought SMB authorizations for certain units at the Coffeen Station. The Illinois EPA reviewed these requests and, as appropriate, granted authorizations in the CAAPP permit to make claims of SMB. These authorizations do not equate to an "automatic exemption" from otherwise applicable state standards. These authorizations are fully consistent with long-standing practice in Illinois for permitting and enforcement. In particular, the nature of the coal-fired utility boilers is such that certain excess emissions may occur during SMB that a source cannot reasonably avoid or readily anticipate. However, the source may be held appropriately accountable for excess emissions that should not have occurred regardless of the authorizations in the CAAPP permit related to SMB. In summary, the provisions in the CAAPP permit related to SMB do not translate into any advance determinations related to actual occurrences of excess emissions. Rather, they provide a framework whereby IPGC is now provided with the ability to make a claim of SMB, with the viability of any such claim subject to further review.

jurisdictions to undertake rulemaking to appropriately revise their SIPs so that SSM events are appropriately addressed.<sup>28</sup>

Moreover, the USEPA does not mandate in the SIP Call that the current short-term emission limitations in the affected SIPs be made applicable at all times, as implied by this comment. Rather, the SIP Call requires that SIPs be revised so that they appropriately address SSM events. USEPA recognized that a number of different approaches may be possible and appropriate to address various types of emission units and their possible circumstances. One possible approach recognized by the SIP Call is the adoption of "alternative emission limitations" for SSM events.<sup>29</sup> The adoption of alternative emission limitations, as contemplated by the SIP Call, would be a task that would be carried out through rulemaking. In Illinois, this rulemaking would involve a proceeding before the Pollution Control Board in which the Illinois EPA, the affected sources and interested members of the public could all participate. In other words, while it is correct that certain provisions of Illinois' SIP dealing with SSM events have now been found by USEPA to be inconsistent with the Clean Air Act, altering these regulatory provisions must proceed through the rule of law. As such, the proper response is rulemaking to correct the now-identified flaw in these provisions that were the result of earlier rulemaking. The SIP call will not affect the requirements of this CAAPP permit until after Illinois acts to develop and put into place revisions to Illinois' SIP that respond to the SIP call.<sup>30</sup>

It is also noteworthy that the SIP call is not based on a quantitative evaluation by USEPA of the impacts on ambient air quality of extra emissions during SSM events. Rather, the SIP call is based on a reassessment of the language of the Clean Air Act by USEPA, as guided by various court decisions related to SSM events.<sup>31</sup>

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<sup>28</sup> Parallel with its SIP Call related to SSM events and its work with affected states and other jurisdictions on revisions to their SIPs, USEPA is also committed to undertaking rulemaking to revise a number of emission standards that it adopted. These standards must also be revised so they appropriately address emissions during SSM

<sup>29</sup> For purposes of the SIP Call, an alternative emission limitation is,

... an emission limitation in a SIP that applies to a source during some but not all periods of normal operation (e.g., applies only during a specifically defined mode of operation such as startup or shutdown). An alternative emission limitation is a component of a continuously applicable SIP emission limitation, and it may take the form of a control measure such as a design, equipment, work practice or operational standard (whether or not numerical).

80 FR 33842 (June 12, 2015)

<sup>30</sup> As with many USEPA rulemakings related to the Clean Air Act, the SIP Call is the subject of an appeal filed with the U.S. Court of Appeals in the District of Columbia, though it is too early to determine what effect this lawsuit may have on the timing or the effectiveness of the SIP Call.

<sup>31</sup> In the SIP Call, USEPA addressed the implications of the SIP Call for air quality in its response to certain comments that opposed the SIP Call because USEPA had not demonstrated that the provisions at issue in the SIP Call have contributed to specific violations of air quality standards or caused harm to public health or the environment.

As explained in the February 2013 proposal, the Supplemental Notice of Proposed Rulemaking and this document, the USEPA does not interpret its authority under Section 110(k)(5) of the CAA to require proof that a deficient SIP provision caused a specific

In addition, this comment has not provided any information to support the claim that the emissions of coal-fired power plants associated with SSM events are significant.

As a final point, notwithstanding representations made in this comment, the Illinois SIP contains no special provisions dealing with applicability of SIP emission limitations during shutdown of emission units. Accordingly, there are actually not any provisions in Illinois' SIP related to shutdown of emission units that need to be changed as a result of the SSMM SIP Call.<sup>32</sup>

- 2. Permit Conditions: 7.1.3(c) (i) and (v)  
Related Condition: 7.1.3(b) (i)

a. Comment:

Even if the underlying Illinois SSM SIP were lawful (which as discussed above, it is not), this Draft Permit still would fail to comply with those SIP provisions because it fails to provide guidance for what sort of malfunctions or startup events might justify exceedances. This problem recurs several times, in both the startup and the malfunction and breakdown sections of the Draft Permit.

In the context of malfunctions, the Draft Permit's key failure is that it does not describe what sort of malfunctions can justify exceedances of applicable air standards. In particular, the Draft Permit fails to explain what "essential service" would justify continuing to operate the facility during a malfunction. See Draft Permit at Condition 7.1.3(c) (i). Without limiting the set of "services" that a plant operator could use to justify continued operation, the Illinois EPA runs the risk of allowing the Draft Permit's exemptions to render its limits on operating during malfunction events essentially meaningless. The Draft Permit also purports to establish a "continuing obligation to minimize excess emissions during malfunction or breakdown," Condition 7.1.3(c) (v)) - but the Illinois EPA has already acknowledged in the Statement of Basis for this permit that "the word 'minimize' is ambiguous and

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violation of the NAAQS at a particular monitor on a particular date, or that a deficient SIP provision undermined a specific enforcement action.

Section 110(k) (5) explicitly authorizes the EPA to make a finding that a SIP provision is substantially inadequate to "comply with any requirement of" the CAA, in addition to the authority to do so where a SIP is inadequate to attain and maintain the NAAQS or to address interstate transport. In light of the court's decision in *NRDC v. EPA*, the EPA has reexamined the question of whether affirmative defenses are consistent with CAA requirements for SIP provisions. As explained in this action, the EPA has concluded that such provisions are inconsistent with the requirements of section 113 and section 304.  
80 FR 33859 (June 12, 2015)

<sup>32</sup> It should also be recognized that the permit conditions challenged by this comment, like conditions challenged by several other comments, are not within the scope of the revisions to the permit that were planned in this "reopening proceeding." Effectively, this comment challenges the validity of certain conditions in the 2013 CAAPP permit that implemented Illinois rules for startups and malfunction/breakdown events. The current proceeding is governed by the applicable requirements of Title V and Illinois' CAAPP program, which act to limit the scope to the revisions that would be made to the CAAPP permit in this proceeding.



usually lacks regulatory meaning." We agree with the Illinois EPA that the word "minimize" is too vague and urge the agency to follow its own advice and replace that term, as well as all such vague language in the Draft Permit, with "new language [that] would more clearly reflect the objective for these conditions." Statement of Basis at 43.

This problem is also prevalent in the startup provisions, where the permit purports to establish a "continuing obligation to demonstrate that all reasonable efforts are made to minimize startup emissions, duration of individual startups and frequency of startups." Draft Permit at Condition 7.1.3(b) (i). The same analysis applies to this provision as elucidated above.

**Response:**

This comment does not support changes to the permit that have been generally requested. As discussed, the CAAPP permit for the Coffeen Station implements provisions of Illinois' rules dealing with SMB events that are currently part of Illinois' approved SIP. These rules do not require permits to include "guidance for what sort of malfunctions or startup events might justify exceedances." The rules lay out a process for addressing startup and malfunction and breakdown events that involves two steps. The first step consists of seeking authorization by means of a permit application to prospectively make a claim related to malfunction/breakdown or startup.<sup>33</sup> This step occurs during permitting. However, the second step of Illinois' process for operation with excess emissions during malfunction or breakdown or startup occurs outside of a permit. This step addresses the showing that must be made when such an event actually occurs to make a viable claim of malfunction/breakdown or startup.<sup>34</sup> The second step provides the case-by-case determinations for particular events that this comment effectively seeks to have included in the permit.

The underlying concern expressed by this comment is whether violations of emission limits that might occur at Coffeen would be "justified." Consistent with the relevant rules, this is a matter that is appropriately concretely addressed in the context of potential enforcement for actual violations, not speculatively in the context of possible violations. In this regard, the additional provisions in the CAAPP permit that are generally requested by this comment are in direct contradiction

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<sup>33</sup> This first step enables conditions to be placed in permits that require source- or unit-specific recordkeeping and reporting relating to malfunction/breakdown and startup events and other requirements related to such events.

<sup>34</sup> For malfunction/breakdown, this showing consists of a demonstration that operation was necessary to prevent injury to persons or severe damage to equipment, or was required to provide essential services. There are two elements to the required showing, "need" and "function". For startup, it shall consist of a demonstration that all reasonable efforts have been made to minimize emissions from the startup event, to minimize the duration of the event, and to minimize the frequency of such events. To a certain extent, this showing may be evaluated on past practice. However, this showing is also prospective, like the showing for malfunction/breakdown, as it relates to future events, which and whose exact circumstances are not known, and which, in fact, may not routinely occur. Again, the malfunction/breakdown or startup authorization that would be provided in the Revised Permit would not preclude appropriate enforcement for violations of state emission standards during such events.

to earlier comments by this commenter. The earlier comments argued that no exceedances of state emission standards during SSM should be condoned by the CAAPP permit for the Coffeen Station. In this comment, further specificity is now requested on exceedances during SSM that might be justified. Comments have requested that the CAAPP permits explicitly provide that they do not preclude enforcement by parties other than the State of Illinois. This comment now requests that provisions be included in the permit that would act to impede the success of such enforcement. However, it would be improper to include such provisions in the permit as it would be contrary to the provisions of the relevant state rules addressing emission exceedances during startups and malfunction events. It would also potentially hinder appropriate enforcement by the State of Illinois for such exceedances.

The changes requested by this comment would also require the Illinois EPA to address matters that as a practical matter are beyond the scope of permitting. If as a purely theoretical matter the Illinois EPA were to attempt to address potential violations of emission standards due to startups or malfunction events in permitting, the Illinois EPA would at a minimum need to speculate on the potential range and nature of those violations.<sup>35</sup> Given that malfunctions and breakdowns are not planned and the circumstances that cause exceedance during startup may also be unplanned, such effort would be unlikely to meaningfully address such events. They certainly would be far less effective than addressing such events in the context of potential enforcement.

This comment also does not identify a deficiency in the conditions of the permit that deal with SMB as compared to the relevant provisions of Illinois' current SIP that address SMB. As related to use of the term "minimize," the discussion in the Statement of Basis referred to by this comment addressed certain planned changes to the wording of various permit conditions related to control measures for material handling and processing operations. The discussion does not address conditions of the permit that deal with SMB and the provisions in Illinois' current rules for SMB.<sup>36</sup> For the proposed changes to the conditions that were being addressed, it was appropriate that the term "minimize" be removed since the usage of

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<sup>35</sup> To fully address in a permit whether future exceedance might be justified, the Illinois EPA would also need to speculate on the circumstances in which such violations would occur. It would also need to consider possible actions or lapses by the source that contributed to the particular violations or the magnitude of the violations. The Illinois EPA would need to consider how violations should be approached if there were previous similar violations or a pattern of violation and how such similar violations or pattern of violations should be identified. This would require consideration of the actions that the source might or might not have taken in response to earlier violations. Even then, the Illinois EPA could not address future improvements in technology during the term of the permit that might be relevant to reducing the magnitude of excess emissions or eliminating exceedances entirely.

<sup>36</sup> The discussion in the Statement of Basis referred to by this comment addresses Conditions 7.2.6(a)(i), 7.3.6(a)(i) and 7.4.6(a)(i). These conditions address the measures that are used for control of particulate matter emissions from coal handling operations, coal processing operations and fly ash handling operations. These conditions do not involve SMB events.

this term did not have a basis in regulations.<sup>37</sup> However, this does not show that the term "minimize" is not appropriate when addressing startup and malfunction and breakdown events. In this regard, the relevant rules, 35 IAC 201.261 and 201.262, specifically provide that sources must take actions to "minimize" startup emissions and excess emissions from malfunction and breakdown events. Given the subject addressed by these rules, it would not be inappropriate to construe the term minimize to mean that a source must take all reasonable efforts to reduce excess emissions. Likewise, when addressing malfunctions and breakdowns it is appropriate to use the term "essential services" as this term is used in 35 IAC 201.262. This term does not merit further elaboration in the permit. The term is readily understood as a service that is important and cannot be provided by another party or at a later time.<sup>38</sup> Disagreement about its meaning should be considered in the context of specific events and the potential need for enforcement.<sup>39</sup>

b. Comment:

I am concerned that startup, shutdown and malfunction procedures at this plant allow for too much air pollution and urge the Illinois EPA to bring these procedures up-to-date with specific provisions for controls that protect public health. The amount of particulates in the air down wind of the Coffeen Station can actually be felt at times and people such as myself who are paying attention to the stacks and air conditions see discharges from this plant that really make us wonder what is going on. It is really hard to have confidence in these permit requirements and if the Power Station is meeting rules when a person can tangibly feel a difference in air quality that makes you wonder what you are breathing. Any part of this permit that has conditions that are no longer up-to-date under the Clean Air Act and all new provisions must be corrected and brought up to date.

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<sup>37</sup> The sentence in the Statement of Basis referred to by this comment stated that "the word 'minimize' is ambiguous and usually lack regulatory meaning." Upon reflection, this statement was improper as it made a generalization and flawed as that generalization was not correct. The sentence should have simply stated that in the specific conditions that were being addressed, the term "minimize" was being removed as its meaning was potentially unclear, especially as it did not have a regulatory basis. In this regard, "minimize" can mean "to reduce to the smallest amount possible" or simply "to reduce." In the subject conditions, the second meaning was intended (i.e., control measures for the units that were being addressed must be implemented as necessary to reduce emissions to provide for compliance). However, in the absence of a regulatory context, the term minimize could have been incorrectly understood to have the first meaning. This clearly could have not been intended in these conditions as the CAAPP does authorize requirements that act simply to require that emission be reduced to the greatest extent possible independent of any applicable regulatory requirement that applies to those emissions. However, changes to the subject conditions were planned to avoid potential misunderstanding.

<sup>38</sup> 35 IAC 201.262 does indicate that "continued operations solely for the economic benefit of the owner or operator" shall not be considered providing essential service.

<sup>39</sup> It should also be recognized that the challenge to certain permit conditions made by these comments are outside the scope of this reopening proceeding. These comments broadly challenge the basis for conditions in the 2013 CAAPP permit that implement Illinois rules for startups and malfunction/breakdown events. However, the Illinois EPA did not propose to revise these conditions in this reopening proceeding. This proceeding is governed by the applicable requirements of Title V and Illinois' CAAPP program, which act to limit the scope to the revisions that would be planned to the CAAPP permit.

Response:

The CAAPP permit for Coffeen reflects an "up-to-date" approach to control of emissions of the coal-fired boilers as it reflects requirements of the rules that currently apply to the emissions of this plant. These requirements include the requirements of recent federal regulatory programs that address the emissions of coal-fired power plants. In this regard, as related to emissions associated with startup, shutdown and malfunction (SSM), the CAAPP permit includes provisions of the MATS rule. These rules, which IPGC must already comply with, represent USEPA's current judgement as the practices that are appropriate to address emissions associated with startup, shutdown and malfunctions of coal-fired utility boilers. In certain respects, the relevant provisions of the MATS rule make the provisions of Illinois rules that deal with startup and malfunction and breakdown (SMB) superfluous for the day-to-day control of emissions of the coal boilers. However, this does not mean that the provisions of these Illinois rules can be removed from the CAAPP permit as they continue to be applicable as they are currently part of Illinois' SIP.

Moreover, with the improvements in air quality that have resulted from the requirement adopted under Clean Air Act, the levels of fine particulate matter in the atmosphere, as relevant for public health, are now very low. Highly sensitive scientific instruments are needed to measure the ambient concentrations of fine particulate in the air. It is inconceivable that individuals could "tangibly feel" differences in particulate matter air quality due to variations in the emissions of the boilers at the Coffeen Station, as claimed by this comment.<sup>40</sup>

3. Permit Condition: 7.1.3(c) (ii)  
Related Conditions: 7.2.3(b) (ii), 7.3.3(b) (ii), 7.4.3(b) (ii),  
7.6.3(b) (ii) and 7.7.3(b) (ii)

Comment:

The Illinois SIP at 35 IAC 201.262 allows the Permittee to continue operation of an affected operation in violation of applicable requirements in the event of a malfunction or breakdown if the Permittee has applied for such authorization in its Title V application pursuant to 35 IAC 201.261, including has submitted "proof [demonstrating that] such continued operation is necessary to prevent injury to persons or severe damage to equipment; or that

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<sup>40</sup> It is more likely that an individual who believes that he or she is feeling these differences is responding to other phenomena. Perhaps, they are interpreting variations in the levels of the "white smoke" that is observed from the stacks at the plant as variations in the levels of particulate emissions. However, this white smoke is condensed steam or water vapor. It is formed when moisture in the hot exhaust from the boilers cools when entering the atmosphere and condenses. It is similar to seeing one's breath on a cold day when you exhale and moisture in your warm breath condenses after entering the cold air. The presence of visible water vapor in the exhaust from the boilers is not an indication of emissions of particulate matter from the boilers.

To determine by human observation whether identifiable levels of particulate matter are present in the exhaust of a unit with a visible steam plume, observations for opacity must be made for a point above the stack after the steam plume dissipates and is no longer visible. In this regard, the opacity monitoring systems on the boilers measure the opacity of the flue gas in the ductwork after the ESPs but before the scrubbers. Accordingly, this monitoring is not affected by condensation of water vapor and the presence of water droplets.

such continued operation is required to provide essential services." Among other things, the 35 IAC 201.261, which is part of Illinois' SIP, requires the Permittee to include in its application "all measures, such as use of off-shift labor or equipment which will be taken to minimize the quantity of air contaminant emissions and length of time during which such operation will continue."

These SIP requirements are reflected in, among others, draft permit Conditions 7.1.3(c) (ii), 7.2.3(b) (ii), 7.3.3(b) (ii), 7.4.3(b) (ii), 7.6.3(c) (ii), and 7.7.3(c) (ii), and attempt to specify the kind of measures that the Permittee must take upon occurrence of excess emissions due to malfunction or breakdown. Specifically, these permit provisions provide that upon occurrence of excess emissions due to malfunction or breakdown of an emission unit, the Permittee shall "as soon as practicable" repair the emission unit, remove the emission unit from service or undertake other action so that excess emissions cease. However, the term "as soon as practicable" is not defined in the draft permit nor explained in the SOB, which renders the above permit conditions practically unenforceable.

As USEPA has previously explained, the term "as soon as practicable," as used in the context of the above permit conditions, must have a specified time limit for it to be practically enforceable. See *In the Matter Of Midwest Generation, LCC Waukegan Generating Station*, Petition Number V-2004-5 (Order on Petition), September 22, 2005, at 11-13. In that Petition Order, EPA determined that because the challenged permit specifically "[provided] 24 hours or noon of the Illinois EPA's next business day, unless an extension has been obtained, as the maximum time permitted to reduce boiler load, repair the affected boiler, or remove the affected boiler from service so that excess emissions cease, "as soon as practicable" has boundaries which makes the term practically enforceable." *Id.* at 13.

As written, the draft permits use of the term "as soon as practicable," in the conditions identified do not include similar clarifying language or definitions as included in the Midwest Generation Waukegan Title V permit. In the issued permit, the Illinois EPA must define the term "as soon as practicable" by including specific time limits by when the Permittee must take corrective actions to make the term practically enforceable.

**Response:**

This comment addresses a matter that is outside the scope of this proceeding. The conditions of the current CAAPP permit addressed by the comment relate to a requirement for the permittee to undertake corrective action "as soon as practicable" following an occurrence of excess emissions due to malfunction or breakdown. The language from these conditions was not the result of including an additional CAA applicable requirement in this permit. This condition also has not been revised in this proceeding. The CAAPP does not provide for a comprehensive review of permits in a reopening proceeding or a planned significant modification to a permit. Such a proceeding is limited to the planned changes to the permit. Without waiving this procedural point, and in the interests of correcting any misunderstanding, the Illinois EPA will provide its perspective on the issues raised by this comment.

The comment expresses the concern that the "as soon as practicable" phrase from the cited permit conditions is not practically enforceable. The comment points out that a 2005 petition response relating to a 2003 draft permit for the Waukegan Generating Station previously addressed the same issue. In that instance, the Administrator observed that the "as soon as practicable" phrase in the challenged condition was accompanied by a specified time limit.<sup>41</sup> At that time, the Administrator reasoned that the time limit of the condition provided boundaries to the "as soon as practicable" phrase, thus making it practically enforceable. As the current permit for Coffeen does not contain the same time limit in its conditions as the earlier version of the Waukegan permit, the comment recommends inclusion of time limits for corrective action to ensure practical enforceability of the subject condition.

The cited 24 hour time period in the malfunction and breakdown condition in the 2003 draft Waukegan permit did not become part of the condition of the permit issued in February 2006. It also did not become part of the initial permits issued to Coffeen or the other coal-fired utilities in September 2005. This aspect of the draft conditions for malfunction and breakdown was not carried over into the issued permits. This was a consequence of refinements to these conditions made by the Illinois EPA in response to public comments generally addressing the SMB authorizations in the permit. In this regard, the February 7, 2006, Responsiveness Summary for the Waukegan permit addressed the changes that were made between the draft and issued permits.<sup>42</sup> Notably, it explained that the approach in the issued permits simplified the permits' malfunction and breakdown provisions by "removing details that might suggest that these authorizations provide greater advance authorization for excess emissions than is possible under Illinois' regulations."<sup>43</sup> In addition to other changes, the permit's language providing for extensions of authorized events was removed in its entirety out of concern that such provisions might appear to constitute authorization by the Illinois EPA for an "acceptable" duration for certain malfunction

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<sup>41</sup> Specifically, Condition 7.1.3(c)(ii) of the 2003 draft Waukegan permit provided:

Upon occurrence of excess emissions due to malfunction or breakdown, the Permittee shall as soon as practicable reduce boiler load, repair the affected boiler, or remove the affected boiler from service so that excess emissions cease. Unless the Permittee obtains an extension from the Illinois EPA, this shall be accomplished within 24 hours\* or noon of the Illinois EPA's next business day,\* whichever is later. The Permittee may obtain an extension for up to a total of 72 hours\* from the Illinois EPA, Air Regional Office unless extraordinary circumstances exist....

\* For this purpose and other related provisions, time shall be measured from the start of a particular incident. The absence of excess emissions for a short period shall not be considered to end the incident if excess emissions resume. In such circumstances, the incident shall be considered to continue until corrective actions are taken so that excess emissions cease or the Permittee takes the boiler out of service.

<sup>42</sup> As noted, similar changes affecting malfunction and breakdown events had been made by the Illinois EPA to the other coal-fired utility permits issued in September 2005.

<sup>43</sup> Responsiveness Summary for Midwest Generation, LLC, Waukegan Generating Station, dated February 7, 2006, at page 25.

or breakdown events, foreclosing any enforcement for such events.<sup>44</sup> The 24-hour time period referred to in the Waukegan petition response was in the part of the provision that was not carried over into the issued permit.<sup>45, 46</sup> It was removed so that the permit would better address the underlying rules.

Reviving the earlier language to now address a concern regarding the practical enforceability of the condition is not appropriate or desirable.<sup>47</sup> While it would be a convenient resolution of the concern posed by this comment, it could raise technically-based concerns. For example, it could call into question the merits of a one-size-fits-all approach for corrective actions for malfunction and breakdown events. For the array of emission units at issue at Coffeen, applying a 24-hour timeframe as the initial deadline for all corrective action could reasonably be viewed as arbitrary. As discussed below, it could also be construed as inconsistent with the provisions of 35 IAC Part 201 Subpart I that apply to malfunctions and breakdowns. When this rule is carefully considered in its full context, it becomes clear that the "as soon as practicable" language from the permit is not so vague as to render it unenforceable in the absence of a specific time period.

The phrase "as soon as practicable" is appropriately used in contexts where the nature of actual events that would be addressed are uncertain and could vary substantially. For example, the timing of corrective action for a major failure of particulate matter control systems on a boiler could vary greatly depending on how quickly alternative generating resources can take over generation and the load on the affected boiler can be reduced. This could depend upon the demand on the grid when the failure occurs. It could take less than one hour or several hours. However, given current generating resources in Illinois, it would be extraordinary if corrective action could not be completed within 24 hours.

It should also be noted that 35 IAC Part 201 Subpart I is silent with respect to when minimization or corrective action that must take place or when excess emissions must cease. The Board did not explicitly address the timing of corrective and remedial actions for malfunction or breakdown events. The Board knows how to create such

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<sup>44</sup> *Id.* at pages 25 and 28.

<sup>45</sup> In this petition response, USEPA was not actually responding to a petition to object to a CAAPP permit. Even though the Illinois EPA had not issued the CAAPP permit, this petition was filed with USEPA because the statutory deadline for filing such a petition is based on a step in the processing of a CAAPP permit other than the actual issuance of the CAAPP permit.

<sup>46</sup> An earlier approach of the draft permit also attempted to define the parameters of the permit authorization for malfunction and breakdown in relation to compliant periods of operation following such events. The issued permit sought to simplify matters by removing language relating to the duration of certain incidents (i.e., absence of excess emissions for a short period). The Responsiveness Summary explained that the language "was no longer needed" because the duration of the incidents covered by the authorization, including possible extensions of the same, was no longer being specified in the permit. See, Responsiveness Summary at page 26.

<sup>47</sup> Based on other comments, the provisions of the permit addressing 35 IAC Part 201, Subpart I continue to be of significant interest and concern to certain individuals and/or organizations.

standards, as illustrated by the related reporting requirement for such events in 35 IAC 201.263, which requires "immediate reporting." Rather, the Board's approach contemplates that the timing of such actions is juxtaposed with the dangers and/or need for essential services arising from a given event. In this regard, corrective action must be viewed as something to be undertaken when a source is able to safely proceed without risk to personnel or severe danger to equipment, and without interfering with providing essential services.

This interplay of 35 IAC Part 201 Subpart I supports the language in the cited permit conditions. The phrase "as soon as practicable" should be understood in light of the separate meanings given to "as soon as" (i.e., in or after a short time) and "practicable" (i.e., capable of being done or accomplished). By requiring corrective action as soon as practicable after the occurrence of excess emissions resulting from malfunction or breakdown, the permit gives recognition to the Board's requirement that the timing of corrective action or minimization of emissions depends upon the circumstances related to the underlying event.<sup>48</sup> It also recognizes that a source's actions may be subject to review or question following an event as at most a prima facie defense is provided for the violation that accompanied a malfunction or breakdown event. As such, the subject permit conditions accurately reflect and implement the requirements of 35 IAC Part 201 Subpart I, consistent with Illinois' current SIP for malfunction and breakdown events.

4. Permit Condition: 7.1.4(j) (i) (B)

Comment:

In Condition 7.1.4(j) (i) (B), please add the word "Condition" before "7.1.4(j) (i) (A)" as follows: "Notwithstanding the requirement in Condition 7.1.4(j) (i) (A) .... "

Response:

The Illinois EPA has corrected the error identified by the comment.

5. Permit Condition: 7.1.4(j) (ii)

Comment:

In Condition 7.1.4(j) (ii), for clarity, please revise as follows: "If the Permittee elects to have ~~the~~ an EGU comply .... "

Response:

The Illinois EPA has made the grammatical correction requested by the comment.

6. Permit Condition: 7.1.5(a) (i)  
Related Condition: 7.1.5(a) (ii)

- a. Comment:

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<sup>48</sup> As this condition contains examples of the types of actions that might be appropriate, it emphasizes that the range of actions may be appropriate. It also indicates that a sequence of actions may be appropriate if initial actions are not sufficient to restore compliance.



Condition 7.1.5(a)(i) of the Draft Permit implies that IPGC may now use solid fuels other than coal at Coffeen. This condition in the 2013 Permit stated, "[t]he Permittee is shielded from the following rules for the affected boilers when the boilers are using *solid fuel* (coal) as its principal fuel." 2013 Permit at Condition 7.1.5(a)(i) (emphasis added). However, Condition 7.1.5(a)(i) of the Draft Permit now states, "[t]he Permittee is shielded from the following rules for the affected boilers when the boilers are using *coal or other solid fuel* as their principal fuel" (emphasis added). Later sentences in this condition also substitute the phrase "solid fuel (coal)" for "coal or other solid fuel." See, e.g., Draft Permit at Condition 7.1.5(a)(ii) and 2013 Permit at Condition 7.1.5(a)(ii).

The Statement of Basis notes that Condition 7.1.5(a) was, in part, "changed to clarify that solid fuel refers to coal." Statement of Basis at 57. However, this change has the opposite effect. Whereas the 2013 Permit explained with a parenthetical that solid fuel meant coal, the Draft Permit instead inserts the phrase "coal or other solid fuel," which implies that there may be other solid fuel used *in addition* to coal. The Illinois EPA has made similar changes in language pertaining to coal and other solid fuel for other CAAPP permits for coal power plants, such as Waukegan. The Illinois EPA has responded to comments on this issue by stating that these changes have not allowed plants to use solid fuels other than coal. See e.g., Waukegan Responsiveness Summary at 69. However, the plain language of these changes creates an opportunity for the source to argue that the permit allows solid fuels other than coal to be burned. The permit should make it clear that IPGC may only burn coal. If, on the other hand, it is the intent to allow IPGC to use other solid fuels, the permit must include conditions clarifying what other solid fuels would be used and addressing any applicable rules and restrictions regarding those fuels.

**Response:**

In Condition 7.1.5(a) of the issued permit, the word "other" is not used in conjunction with "solid fuel." However, the use of the term "solid fuel" in this condition is appropriate. This is because the relevant state rules that address emissions from burning coal actually apply to the burning of solid fuel. That is, these rules do not use the term "coal" but "solid fuel." The changes to the wording of Condition 7.1.5(a) do not affect IGC's ability to use fuels other than coal in these boilers.

While the principal fuel for these boilers is coal, the possible use of other, alternative solid fuels in conjunction with coal is addressed elsewhere in the permit, by Condition 7.1.11(c)(ii). This condition recognizes that the source may have the capability to burn a combination of coal and other solid fuels.<sup>49</sup> The use of other fuels, as addressed by Condition 7.1.11(c)(ii) would not change the applicable emission standards or requirements that apply to these boilers. In this regard, Condition 7.1.11(c) does not provide for

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<sup>49</sup> The nature of the other fuels used in the boilers is limited by USEPA rules addressing burning of wastes. If the fuel is not a "traditional fuel," as defined at 40 CFR 241.2, the fuel must qualify as a "non-hazardous secondary material" that is not solid wastes when combusted, as specified at 40 CFR 241.3(b) or 241.4(a)).

burning of wastes or fuels derived from wastes in the boilers. (This is also addressed by Condition 7.1.5(e), which explains that the permit is based on these boilers not burning solid waste.)

b. Comment

If solid fuels other than coal will be used at Coffeen, is IPGC already using solid fuels other than coal at this plant? If so, what other solid fuels has IPGC been using? Also, what is the ratio of solid fuel usage to coal usage?

**Response:**

Coal is the only solid fuel currently being used at Coffeen.

c. Comment

What solid fuels does IPGC intend to use in the future? If IPGC intends to use solid fuels other than coal at the plant, what is the projected ratio of solid fuel usage compared to coal?

**Response:**

Currently, the only solid fuel that IPGC intends or plans to use at Coffeen is coal.

7.     **Permit Condition:**             7.1.6(a) (i)  
       **Related Condition:**        7.1.9 (a) (vi)

a. **Comment:**

Draft Condition 7.1.6(a) (i) would not require IPGC to take preventative measures in response to combustion evaluations, but rather leaves the decision to IPGC as to whether to make adjustments in response to the evaluations. The Statement of Basis for the Draft Permit provides no explanation of this change other than to state that "[r]evisions would be made to clarify the nature of measures that the Permittee might take as a result of combustion evaluations." Statement of Basis at 31. The proactive approach of taking preventative measures would eliminate problems with the boilers before they start. Otherwise, if foreseeable problems do occur, IPGC would have the discretion to merely react to them after the fact. It would be wholly inappropriate for IPGC to continue to operate the boilers if IPGC knew there was a need for preventative maintenance but did not perform that maintenance.

Similar changes in language have been made to other permits, *See, e.g.* Waukegan Responsiveness Summary at 55.<sup>50</sup> In the Waukegan Responsiveness Summary, the Illinois EPA stated that the comments on this condition "assume that preventative measures must be implemented as part of any combustion evaluation." (Waukegan Responsiveness Summary, at 55.) The assumption of that comment is wholly reasonable. Indeed, if a combustion evaluation reveals any problems with a boiler, it would be imprudent to *not* implement responsiveness measures. The Waukegan Responsiveness Summary goes on to say that "in actual practice, combustion evaluations *may* not identify any preventative measures that *need* to be taken." *Id.*

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<sup>50</sup> "Responsiveness Summary for the Significant Modification of the CAAPP Permit issued to Midwest Generation for the Waukegan Generating Station," June 16, 2016 (Waukegan Responsiveness Summary.)

(emphasis added). Thus, the Waukegan Responsiveness Summary makes clear that combustion evaluations will, at times, identify preventative measures that must be taken. When this happens, the Permittee must take these preventative measures, and Condition 7.1.6(a) (i) should clearly state as much. These revisions in requirements for combustion evaluations should also be reflected in the recordkeeping requirement that relates to this provision, Condition 7.1.9(a) (vi).

**Response:**

This comment did not show that the planned revisions to Condition 7.1.6(a) (i) were not appropriate. If anything, as this comment suggests that required combustion evaluations might identify "problems with a boiler," this comment confirms flaws with the language that was in this condition. What the comment does not consider, and the Illinois EPA did not appropriately consider when originally developing this condition, is that combustion evaluations, by their nature, are preventative. This is because coal-fired utility boilers routinely operate well within this standard. Combustion evaluations should not be expected to reveal an exceedance of the state CO emission standard at 35 IAC 216.121. The required combustion evaluations serve both to confirm compliance with the state CO emission standard at 35 IAC 216.121 and to assure compliance with this standard.

Accordingly, as this condition provided that combustion evaluations include "...any adjustments and preventative and corrective measures undertaken...", it was not clear whether a distinction was intended between "preventative measures" and "corrective measures." If so, what was the distinction? In addition, as part of the settlement of the appeal of the initial CAAPP permit, it was recognized that any such distinction would not be appropriate or useful in the context of combustion evaluations. In the context of these combustion evaluations, the two classes of preventative actions that the permit contemplates that the source may take are adjustments and "other measures." In the permit, these other measures may be appropriately referred to as "corrective measures."<sup>51</sup>

While this comment suggests that there is a difference between "preventative measures" and "corrective measures" for combustion evaluations, it does not show what the difference might be. That is, if a combustion evaluation reveals "problems" for a boiler, the comment does not explain what the differences in implications or consequences would be for implementation of "preventative measures" compared to implementation of "corrective actions." Certainly, such differences would exist if the "problem" involved a deviation from the CO standard, but then this would then be addressed by the required deviation report.<sup>52</sup> Otherwise, in the context of the

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<sup>51</sup> Adjustments involve changes to how equipment is operated. Adjustments include changes to the standard settings for burners, dampers and other components of the combustion systems on a boiler. Adjustments also include changes to the settings in the automated combustion management system on a boiler. Changes to operational monitoring systems that accompany calibrations would also be adjustments.

<sup>52</sup> Pursuant to Section 39.5(7) (f) (ii) of the Act, reports for deviations must include information for "any corrective actions or preventative measures taken." However, as combustion evaluations are not "deviations," the terminology used for reporting of

combustion evaluations required by Condition 7.6(a), it is not apparent why a distinction between preventative measures and corrective measures is meaningful. Accordingly, this distinction is not present in the revised permit that has been issued.

This comment also does not show that, in addition to requiring that the source conduct periodic combustion evaluations for boilers that include measurements of CO concentrations at the start and conclusion of the evaluations, the permit should specify that adjustments or other measures must be made for the combustion systems of the boilers as part of these evaluations. The explicit requirement for measurements of CO concentration serves to address compliance with 35 IAC 216.121. Beyond this, the permit simply recognizes that these combustion evaluations will likely include adjustments and other measures to maintain good combustion. The permit does not excuse the source from taking any preventative actions that are necessary to maintain compliance. As observed by this comment, those actions would extend to actions that the source should have taken proactively to maintain compliance. However, the permit need not state that the source must take such measures as it is implicit that the source must take such actions so that the boilers routinely operate in compliance with 35 IAC 216.121.

b. Comment:

In discussing changes to Condition 7.1.6(a), the Illinois EPA has also explained that such changes were made because the applicant was "constrained by the bounds of technical feasibility." 2015 Waukegan Statement of Basis at 17. However, the Illinois EPA never explained why these actions were not technically feasible.

Response:

As was explained in the 2015 Waukegan Statement of Basis, revisions to the CAAPP permit for the Waukegan Station were planned to make clear that Condition 7.1.6(a) only required diagnostic measurements of CO, not formal emission testing. Revisions were also planned to make clear that adjustments or other measures were not mandatory as part of a combustion evaluation. These revisions were planned as part of the settlement of the initial CAAPP permit for the Waukegan Station appeal as they would respond to the relevant concerns for Condition 7.1.6(a) raised by Midwest Generation in the appeal.

In fact, the 2015 Waukegan Statement of Basis indicates that Midwest Generation represented in its appeal that its ability to make adjustments and other measures as a part of a combustion evaluation was constrained by "technical feasibility." (In this regard, this comment misrepresents the 2015 Waukegan Statement of Basis as the comment attributes this finding to the Illinois EPA.<sup>53</sup>) Instead of

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deviations is not appropriate for routine combustion evaluations. Moreover, in the unlikely event that a combustion evaluation would show a deviation, a "deviation report" would be required for that deviation. In that report, the source would need to describe "the corrective actions or preventative measures taken." In the context of such a report, a distinction can be made between the "corrective actions" taken to respond to or correct the deviation and the "preventative measures" taken to prevent or reduce the likelihood or severity of similar deviations in the future.

<sup>53</sup> With respect to the planned changes to Condition 7.1.6 and "technical feasibility," the 2015 Waukegan Statement of Basis stated,

relating these concerns about Condition 7.1.6(a) to technical feasibility, it would have been clearer if these concerns had been related to the impropriety of mandating that certain actions be taken if those actions would not be necessary or appropriate in all circumstances.

8.     **Permit Condition:**             7.1.7(a) (ii)  
       **Related Condition:**         7.1.10-2(a) (i) (B)

a.     **Comment:**

Condition 7.1.7(a) (ii) of the Draft Permit changes how PM emissions measurements are to be conducted at Coffeen. Condition 7.1.7(a) (ii) of the 2013 Permit required Ameren to collect PM emission measurements:

Within 90 days of operating an affected boiler for more than 72 hours total in a calendar quarter at a load that is more than 5 Megawatts or 2 percent higher (whichever is greatest) than the greatest load on the boiler, during the most recent set of PM tests on the affected boiler in which compliance is shown...

Condition 7.1.7(a) (ii) of the Draft Permit states:

PM emission measurements shall be made within 90 days of operating an affected boiler for more than 72 hours total in a calendar quarter at a load that is more than 15% higher than the greatest load on the boiler, during the most recent set of PM tests on the affected boiler in which compliance is shown...

First, it is problematic that the Draft Permit would change the threshold triggering PM emission testing by eliminating any megawatt-increase trigger while simultaneously increasing the load-

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Midwest Generation, LLC appealed the condition because the requirement for combustion evaluation appeared to require formalized emissions testing and its ability to make "adjustments and preventative and corrective measures" was constrained by the bounds of technical feasibility. In settlement negotiations, the Illinois EPA acknowledged that the original intent of this condition was not to require formal diagnostic testing, which is an engineering evaluation of systems to gather data beyond the standard operational measurements. Rather, the intent was to obtain quantitative information from the standard operational measurements on a continuous or periodic basis and thus serve as an assessment for the functioning of combustion systems in a boiler. The permit would be revised to clarify this aspect of the combustion evaluation.

The permit would also be revised to clarify that "adjustments and preventative and corrective measures" are not a compulsory requirement for each combustion evaluation. The original intent was to ensure that adjustments or other corrective measures would occur if, depending upon the findings of a given evaluation, such changes are needed to restore combustion efficiency. The revised permit would now eliminate the ambiguity of the earlier condition by providing that combustion evaluations include "any adjustments and/or corrective measures" undertaken to maintain combustion efficiency. The source is still required, consistent with the existing recordkeeping requirements of the CAAPP permit, to maintain records of the adjustments and corrective measures resulting from the combustion evaluation.

2015 Waukegan Statement of Basis, at 17 and 18

capacity trigger from 2 percent or higher than the greatest load on the boiler to 15 percent or higher than the greatest load on the boiler. This significant increase in the load that would trigger PM testing creates the risk of the boilers operating with undetected PM exceedances. To wit, if the load at which the prior tests were conducted was not the maximum allowable load, Draft Condition 7.1.7(a)(ii) could allow the boiler to burn considerably more coal before needing to retest emissions, and would as such fail to assure compliance with emission limitations during the period within which the Plant has had an up-to 14% increase in load. This condition therefore fails to assure compliance with the PM limits, and should thus be removed from the Draft Permit and replaced with requirements that do, in fact, assure compliance with applicable PM requirements. See *Sierra Club*, 536 F.3d at 674-75. It would be far more appropriate and consistent with the Act to retain the requirement of the 2013 Permit providing that PM emissions testing is required if the boiler operates at a load that is more than five Megawatts or two percent higher (whichever is greatest) than the greatest load on the boiler during the most recent set of PM tests. The reporting requirements delineated in Condition 7.1.10-2(a)(i)(B) of the permit also should be revised to be consistent with that mandate, requiring reporting of the total number of hours in which a coal boiler exceeded a load that was more than two percent higher than the greatest load on the boiler during the most recent set of PM tests.

Additionally, the 72 hours that the Plant is allowed to run at increased load before triggering new PM testing requirements is far too long. If a boiler has an increased load for even three hours, due to the three-hour averaging period for PM, that three-hour increase alone could lead to a violation. A 72 hour trigger could allow up to 18 violations of PM emissions without detection. Thus, this 72 hour requirement should be removed and the Draft Permit should be revised to provide that at a much shorter amount of time of operation at increased load triggers PM emissions testing requirements.

As written, Condition 7.1.7(a)(ii) authorizes the Permittee to test at close to 100 percent of its "seasonal maximum" operating load, without having to retest in the future unless, among other things, the Permittee actually operates the boilers at 115 percent or higher of the maximum operating load for more than 72 hours in a calendar quarter. Condition 7.1.7(a)(iv) provides a similar approach for CO. These provisions could allow the Permittee to violate PM and CO emission limits, if emissions from the last compliant source test were close to the limit. It could also allow the source to indefinitely operate the boilers at levels that are higher than the representative conditions established during the periodic emission testing, as discussed later in a comment on Condition 7.1.7(b)(i).

**Response:**

**In response to this and other comments, Draft Condition 7.1.7(a)(ii) has not been carried over into the issued permit. Rather, Condition 7.1.7(b)(i) now specifies that the periodic testing of the coal boilers, as is required to authoritatively confirm compliance with state PM emission standards, must be conducted at "maximum normal operating load conditions." This requirement, which uses terminology in the MATS rule for PM emission testing at 40 CFR 63.1007(a)(2),**

will serve to ensure that the required emission testing is conducted at sufficiently high load that the results can be considered representative.<sup>54</sup> It is also noteworthy that the PM testing required as part of the conditional approval of the Compliance Assurance Monitoring (CAM) plans shows that, even with several fields in the ESPs being out of service, the boiler's compliance margins for the PM standards are well above 90 percent.<sup>55</sup> That is, the measured PM emissions are less than 10 percent of the applicable standards.

Revised Condition 7.1.7(b) (i) also serves to address the load of the coal boilers during testing for CO emissions. This is because, unless measurements of CO emissions have been made during the Relative Accuracy Test Audit of the SO<sub>2</sub> or NO<sub>x</sub> continuous emission monitoring system (CEMS) preceding a test, testing for CO emissions is to be conducted in conjunction with PM testing Condition 7.1.7(a) (ii) (A) in the issued permit.)<sup>56, 57</sup>

b. Comment:

The permit record does not show that the Permittee has provided a demonstration that this approach will enable the boilers to remain in continuous compliance with applicable emission limits at all times, including when operating at maximum capacity. The Statement of Basis similarly does not provide such an explanation.

The main reason for performance testing of an emission unit is to determine whether emissions from the source can demonstrate compliance on a continuous basis.<sup>58</sup> Accordingly, performance tests conducted for the purpose of demonstrating compliance must be conducted under normal process operating conditions producing the highest emissions. This expectation is reflected in USEPA's Stack Testing Guidance, which recommends that a source be tested at an

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<sup>54</sup> Comments on the USEPA's proposed MATS Rule Technical Corrections pointed out that at any given time, the load of EGUs may be restricted due to equipment failure or operating at less than maximum output because of commercial arrangements or transmission system restrictions or constraints, or be load-restricted by the Regional Independent System Operator. In response to these comments, USEPA observed that the MATS rule does not require EGUs to operate at maximum normal operating load during testing, but instead allows stack tests to be conducted at the load at which the EGU is capable of operating at the time of the test. This is because 40 CFR 63.10007(a) (2) specifies that EGU load for purposes of testing to demonstrate compliance "should be representative of site specific normal operations during each test run."

<sup>55</sup> The results of this emission testing were summarized in Section 4.2 of the Statement of Basis prepared for this planned revision of the 2013 CAAPP permit.

<sup>56</sup> This condition provides that that intervals between CO testing can be twice those for PM testing if the measurements show that emissions are half the applicable state CO standard, 35 IAC 216.121.

<sup>57</sup> The operating rate or load of the coal boilers during emission testing for CO emissions does not present the same concerns that are present for testing of PM emissions. This is because add-on control devices are not used on the boilers for CO emissions whereas PM emissions are controlled with ESPs. As a general matter, the performance of ESPs is inversely affected by load, as higher flue gas flows and lower residence times act to lower control efficiency.

<sup>58</sup> Section 302(k) of the CAA defines the terms "emissions limitation" and "emission standard" to mean "a requirement established by the state or Administrator which limits the quantity, rate, or concentration of emissions of air pollutants *on a continuous basis...*" (emphasis added).

operating level that would represent the highest emissions during the expected normal operation of the source.<sup>59</sup>

Where it is not possible to replicate such conditions during the test (such as due to safety concerns, or if testing is being conducted during a period of low productivity by the source), the source must provide the permitting authority with a demonstration that the source will be in continuous compliance with applicable emission limits at all times, including when operating at maximum capacity. As explained in the stack testing guidance, the Permittee is responsible for making this demonstration.

In the absence of an adequate explanation in the permit record or Statement of Basis, the permit should be revised to require that any re-testing be performed at the maximum capacity at which the boilers are expected to be operated. Alternatively, the permit could prohibit the boilers from operating at a load higher than the operating load during the most recent performance test that demonstrated compliance. Without such revisions, the permit does not assure compliance with all applicable requirements, in accordance with 40 CFR 70.6(a)(1).

**Response:**

**As discussed, the change to the permit requested by this comment is not appropriate. Testing of the boilers at their maximum capacity is not needed to adequately demonstrate or assure compliance with applicable state emission standards nor would such testing be reasonable. This is shown by the approach to emissions testing taken by USEPA in the MATS rule.**

**9. Permit Condition: 7.1.7(a)(iii)**

**Comment:**

Under Condition 7.1.7(a)(iii) of the Draft Permit, for the coal boilers, PM stack tests must be done within 15 months of the preceding PM stack test if, based on that stack test, the compliance margin for PM is less than 20 percent; within 27 months of the preceding PM stack test if, based on that stack test, the compliance margin for PM is between 20 and 40 percent; and within 39 months of the preceding PM stack test if, based on that stack test, the compliance margin for PM measurement was greater than 40 percent.

The length of time between those stack tests renders them insufficient to demonstrate compliance with PM limits. As set forth in Condition 7.1.4(g), the state PM limits for the coal boilers at Coffeen are 1-hour limits over a three-hour averaging period: 0.19 and 0.15 lb/mmBtu in any single hour for Boiler 1 and Boiler 2, respectively. Stack tests that take place up to 39 months apart simply cannot ensure that, during every hour the boilers are operational, they are complying with their respective limits. See *Sierra Club v. EPA*, 536 F.3d 673, 674-75 (D.C. Cir. 2008) (emphasis added) (noting that annual monitoring would not ensure compliance with a daily emission limit).

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<sup>59</sup> See USEPA Clean Air Act National Stack Testing Guidance, April 27, 2009, available at: <http://www3.epa.gov/tnm/c011guidlncUgd-050.pdf> (pp. 14-16) (USEPA Stack Testing Guidance)



The inadequacy of the stack tests to assure compliance is not cured by the remainder of the CAM plans for PM in the Draft Permit because, as discussed in detail in other comments, that CAM plans are themselves inadequate to ensure compliance with PM limits. As such, because the Draft Permit does not contain sufficient monitoring and testing requirements to assure compliance with the PM limits, it falls short of Title V's requirements. See *Sierra Club*, 536 F.3d at 674-75 ("a monitoring requirement insufficient 'to assure compliance' with emission limits has no place in a permit unless and until it is supplemented by more rigorous standards."); see also *NRDC v. EPA*, 194 F.3d at 136; *In the Matter of Midwest Generation, LCC, Waukegan Generating Station*, 2005 EPA CAA Title V LEXIS 14 at \*44-45; 40 CFR 70.6(a)(3)(i)(B); 40 CFR 70.6(c)(1). The permit should require PM CEMS, instead of infrequent PM stack tests paired with inadequate parametric monitoring, to demonstrate compliance with the one-hour PM emissions limits.

**Response:**

As observed by this comment, the PM testing that is required for the boilers by Condition 7.1.7(a)(iii) is not relied upon to address ongoing, day-to-day compliance with the applicable state PM emission standards. Rather, the permit relies on the CAM plans as the means to address ongoing compliance between testing. In this regard, as explained by USEPA when adopting 40 CFR Part 64,

[t]he CAM approach builds on the premise that if an emissions unit is proven to be capable of achieving compliance as documented by a compliance or performance test and is thereafter operated under the conditions anticipated and if the control equipment is properly operated and maintained, then there will be a reasonable assurance that the emission unit will remain in compliance. In most cases, this relationship can be shown to exist through results from the performance testing without additional site-specific correlation of operational indicators with actual emission values. The CAM approach builds on this fundamental premise of the regulatory structure.

62 FR 54900, 54926, Oct. 22, 1997

The CAM plans addressed by the issued permit are not deficient. The specific comments that have been made on these CAM plans have been appropriately considered and addressed by the Illinois EPA. As such, this comment does not show that PM CEMS are necessary on the boilers to address compliance with the applicable state standards.

It should also be noted that, other than to observe that the required PM testing does not serve to address ongoing compliance, this comment does not actually comment on the "tiered approach" for such testing that is contained in the permit, other than to suggest that it is not a substitute for appropriate Periodic Monitoring. Tiered approaches to emission testing are used in a number of USEPA regulations. They act to reasonably reduce the burden associated with testing for sources that comply with an applicable emission standard by a significant margin of compliance. Tiered approaches also enable a regulatory authority to focus its resources on emission units whose compliance is less clear. A tiered approach to

**PM testing, as contained in Condition 7.1.7(a) (iii), is appropriate for the coal boilers at Coffeen.<sup>60, 61</sup>**

10. **Permit Condition:** 7.1.7(b) (i)  
**Related Conditions:** 7.1.7(a) (ii) and (iv)

a. **Comment:**

Condition 7.1.7(b) (i) of the draft permit authorizes (initial) testing of the boilers at a capacity of 90 percent or greater of the seasonal maximum operating loads. As with Conditions 7.1.7(a) (ii) and 7.1.7(a) (iv) above, these provisions could allow the Permittee to violate PM and CO emission limits if emissions from the last compliant source test were close to the limit. It could also allow the Permittee to indefinitely operate at levels that are higher than the representative testing conditions.

Again, the permit record does not show that the source has provided a demonstration that this will enable the boilers to remain in continuous compliance with applicable emission limits at all times, including when operating at maximum capacity. The Statement of Basis also does not provide an explanation as to how this approach would yield PM and CO emissions that represent maximum emissions from the affected boilers.

The main reason for performance testing of an emission unit is to determine whether emissions from the source can demonstrate compliance on a continuous basis. Accordingly, performance tests conducted for the purpose of demonstrating compliance must be conducted under normal process operating conditions producing the highest emissions. This expectation is reflected in USEPA's 2009 Clean Air Act Stack Testing Guidance, which recommends that a source be tested at an operating level that would represent the highest emissions during the expected normal operation of the source.

Where it is not possible to replicate such conditions during the test (such as due to safety concerns, or if testing is being conducted during a period of low productivity by the source), the source must provide the permitting authority with a demonstration that the source will be in continuous compliance with applicable emission limits at all times, including when operating at maximum capacity. As explained in the USEPA Stack Testing Guidance, the Permittee is responsible for making this demonstration.

In the absence of an adequate explanation in the permit record, the permit should be revised to require that testing be performed at the maximum capacity at which the boilers are expected to be operated. Alternatively, the Illinois EPA could add a permit condition that prohibits the boilers from operating at a load higher than the operating load during the most recent performance test that demonstrated compliance. Without such revisions, the permit does not

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<sup>60</sup> For the coal boilers at Coffeen, the compliance margins in the most recent PM tests were over 40 percent so that the next tests must be conducted within 39 months of those tests.

<sup>61</sup> Another approach to tiered testing is one that increases the interval between required tests after a number of tests have been conducted that all show emissions are below the applicable regulatory limit or a set value below that limit.

assure compliance with all applicable requirements, in accordance with 40 CFR 70.6(a)(1).

Response:

The concerns expressed by this comment have also been addressed in the issued permit as Condition 7.1.7(b)(i) now uses the terminology of the MATS rule to define the operating load at which the coal boilers must be operated during periodic emission testing. This condition no longer refers to the seasonal load of a boiler.

Condition 7.1.7(b)(i) in the issued permit is fully consistent with the principle expressed in the USEPA Stack Test Guidance that, to the fullest extent possible, emission testing should be conducted under conditions that are representative of those that pose the greatest challenge to the ability of a unit to meet applicable limits.<sup>62</sup> This guidance does not state that emission testing must be conducted at the maximum load at which the tested emission unit would subsequently ever be operated, as implied by this comment.

It is also noteworthy that, as already discussed, testing of the coal boilers showed compliance with the applicable state PM standards with substantial margins of compliance. The results of future testing should likewise not be expected to be close to the applicable standards.<sup>63</sup> Moreover, if this is the case or if a boiler is operated in such a way that further emission testing is warranted

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<sup>62</sup> The USEPA Stack Test Guidance is not directly applicable to the emission testing addressed by this comment. As explained in this guidance,

...for the purpose of this guidance, stack testing is being more narrowly defined as  
- Any performance testing conducted for the purposes of determining and demonstrating compliance with applicable standards of 40 CFR Parts 60, 61 and 63...  
USEPA Stack Testing Guidance, p. 3

<sup>63</sup> The USEPA Stack Testing Guidance does acknowledge that a permitting authority, presumably in appropriate circumstances, may restrict the operation of an emission unit based on the conditions under which emission testing was conducted.

This guidance does not affect the ability of delegated agencies to prohibit a facility from operating at levels of capacity different from the level used during the stack test, or to restrict production to reflect conditions equivalent to those present during the stack test.  
USEPA's Stack Testing Guidance, p. 16.

At the same time, the USEPA Stack Testing Guidance also indicates that the decision whether further testing should occur is one for which the permitting agency must make, presumably based on its experience and judgment,

...the facility is not required automatically to retest if the facility's operating conditions subsequently vary from those in place during the performance test. The delegated agency must determine whether retesting is warranted; however, in both instances, the facility is responsible for demonstrating to the satisfaction of the delegated agency that the facility is able to continuously comply with the emissions limits when operating under expected operating conditions, taking into consideration the factors discussed above ...  
USEPA Stack Testing Guidance, p. 16.

to confirm compliance with the state PM standard, the Illinois EPA is authorized to require that IPGC have such testing conducted.<sup>64</sup>

b. Comment:

Condition 7.1.7(b) (i) of the Revised CAAPP Permit for Coffeen, issued October 17, 2013 (the "2013 Permit") required CO and PM emissions testing to be performed at the maximum operating loads of the affected boilers. However, Draft Condition 7.1.7(b) (i) would only require that measurements be performed at 90 percent or better of the "seasonal" maximum operating loads.

There are two problems with this requirement. First, what is meant by the word "seasonal" in this condition is unclear, undermining the Title V program's purpose of "enable[ing] the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements." (Operating Permit Program, 57 FR 32250 and 32251, July 21, 1992).

Second, CO and PM emissions should be measured under operating conditions that would lend themselves to the highest level of emissions. Otherwise, there might be a spike in emissions between those reflected in testing and those that occur when the affected boilers are operating at maximum loads, and the testing will thus fail to demonstrate compliance with applicable CO and PM standards at those times. Accordingly, the Draft Permit should provide for CO and PM emissions testing at maximum allowable operating loads to ensure that authorities are aware of the maximum emissions levels that might occur and can add permit conditions to ensure emissions do not exceed allowable levels.

Response:

As discussed, the concerns expressed in this comment have been generally addressed in the issued permit by reliance on the approach to operating load of boilers in the relevant provisions of the MATS rule. This approach requires that testing of EGUs be conducted at loads such that the results of the test can be considered representative of the operation and emissions of the boiler. It does not require that testing of EGUs be conducted at the design or rated loads of EGUs, which loads may not be achievable during testing and may rarely, if ever, be achieved in practice.

11. Permit Condition: 7.1.9(a) (v) (B)

Comment:

In Condition 7.1.9(a) (v) (B), consistent with other revisions and for clarity, please delete "at a minimum."

Response:

In the issued permit, the phrase "at a minimum" is not included in this condition, as requested by this comment. Upon consideration, the inclusion of this phrase in the subject requirements for recordkeeping could be misinterpreted as requiring the source to keep records for certain other information that is not actually

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<sup>64</sup> Specific provision for such testing "upon request" by the Illinois EPA is provided for by Condition 7.1.7(a) (iv).

specified or identified in this condition.<sup>65</sup> This change was also made in other similar condition where this phrase was present.

12. Permit Condition: 7.1.9(b)

Comment:

The compliance procedures within Condition 7.1.12(b) should incorporate the recycle pumps, since they are relied upon to demonstrate compliance with applicable PM limits. Pursuant to 40 CFR 70.6(c)(1), Title V permits shall contain "compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with terms and conditions of the permit." The boilers are subject to the CAM rules, 40 CFR Part 64. Generally, monitoring developed under CAM meets the requirements for monitoring under 40 CFR Part 70. The CAM plans for the boilers include operation of the Wet Flue Gas Desulfurization (WFGD) recycle pumps as an indicator of compliance, in addition to the continuous opacity monitoring systems (COMS). However, there are no requirements related to the proper operation of the WFGDs in Condition 7.1.9 or 7.1.12(b). The PM compliance measures in Condition 7.1.12(b) should be revised to include monitoring and recordkeeping associated with the WFGDs or a reference to where those requirements are present in the permit.

Response:

The recordkeeping requirement requested by this comment has been included in the issued permit in new Condition 7.1.9(b)(v). This is because it is appropriate that the permit require the source to keep records for key operating parameters of the WFGDs. However, as will be explained later when responding to comments on the CAM plans, the CAM plans addressed by the issued permit no longer address the operation of the WFGDs.

13. Permit Condition: 7.1.9(b)(ii)  
Related Condition: 7.1.12(b)

Comment:

The PM emissions of the boilers are controlled with electrostatic precipitators (ESPs). Without proper functioning and operation of the ESPs, PM emissions from the boilers may not be adequately controlled and the source would potentially be out of compliance with the applicable PM limits. As part of the permit, the compliance measures for the applicable PM limits, Conditions 7.1.9(b)(ii) requires the source to keep records of certain ESP parameters, including the status of each ESP field (recorded at least once per shift), primary voltages and currents (recorded at least once per day), secondary voltages and currents (recorded at least once per day) and sparking rates (recorded at least once per day). However, it is not clear how keeping these basic records will demonstrate that the ESP is operating in a manner that assures that PM emissions are being controlled properly.

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<sup>65</sup> The inclusion of the phrase "at a minimum" in this condition was intended to recognize that the source could keep the information for which records must be kept in "records" that also included other information that it is not required to keep (e.g., information that is not related to emissions). However, this may occur even if the phrase "at a minimum" is not included in this condition.

To enhance enforceability of the PM limits in Condition 7.1.4(g), USEPA recommends that a correlation be established between the operating ranges of the ESP parameters and PM emissions. Including these correlated ranges in the permit, will assure that the ESP is in proper operation, and that the applicable PM limits are enforceable.

**Response:**

The principal purpose of the recordkeeping that is required by Condition 7.1.9(b) (ii) for the operating parameters of the ESPs is to have certain relevant information available if an excursion is identified by the CAM Plan.<sup>66, 67</sup> As observed by this comment, the required records for the operating parameters of the ESPs would not serve to address compliance with the PM limits. Under the permit, compliance with PM limits is addressed by means of CAM plans that use opacity as the indicator parameter and not operating parameters of the ESPs. As such, the operation and maintenance of the ESPs is appropriately addressed in the permit without the need to correlate the operating parameters of the ESPs to PM emissions and include ranges for those operating parameters in the permit.<sup>68</sup> As already discussed, USEPA has determined that Periodic Monitoring that meets the requirements of 40 CFR 70.6(a) (3) (i) (B) is sufficient to satisfy the requirements of 40 CFR 70.6(c) (1) (i.e., will be sufficient to assure compliance with subject permit terms and conditions).

14. Permit Condition: 7.1.9(h) (ii) (B)

**Comment:**

Draft Condition 7.1.9(h) (ii) (B) would replace Condition 7.1.9(h) (ii) (B) of the 2013 Permit. Under the 2013 Permit, Ameren was required to maintain a record of specific information "for each startup of an affected boiler where an exceedance from a relevant standard did or *may* have occurred during startup..." (emphasis added). However, under Draft Condition 7.1.9(h) (ii) (B), IPGC would not be required to keep a record of when there may have been an exceedance from a relevant standard other than PM. Rather, IPGC would only need to maintain a record if there were an *actual* exceedance of a relevant standard occurred during startup.

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<sup>66</sup> The records that are required would enable the Illinois EPA or USEPA to determine whether particular operating parameter(s) of the ESP during an excursion were meaningfully different from those for normal operation of the ESP.

<sup>67</sup> As a more general manner, when as a matter of good practice, a source would keep records related to the operation of an air pollution control device, it is appropriate that a CAAPP permit require the source to keep such records. Such information may serve to confirm the consistent operation of the control device by the source and timely action by the source in response to changes in the operating parameters of the control device.

<sup>68</sup> As is evident from USEPA's *Compliance Assurance Monitoring (CAM) Protocol For An Electrostatic Precipitator (ESP) Controlling Particulate Matter (PM) Emissions from a Coal-Fired Boiler*, Proposed (USEPA ESP CAM Protocol), establishing a correlation between the operating parameters of an ESP and the PM emissions of a coal-fired boiler is not a simple matter. In this guidance, USEPA suggested that monitored opacity of a coal-boiler should be used as a "screening technique" in the CAM plan. If the monitored level of opacity exceeds the screening value, an assessment of compliance for PM emissions should then be conducted using the operating parameters of the ESP during the event and a computer model. This guidance did not suggest that CAM plans should establish indicator ranges for the operating parameters of ESPs on coal boilers.

Furthermore, although Draft Condition 7.1.9(h)(ii)(B) would require IPGC to maintain a record even if it is not certain that a deviation from PM compliance occurred, such a record must only be created if this deviation was "likely." Under Condition 7.1.9(h)(ii)(B) of the 2013 Permit, Ameren was required to maintain a record if an exceedance *may* have occurred during startup, indicating that a record was required if there was *any* uncertainty as to whether a deviation had occurred. The provision in the 2013 Permit better comports with the Clean Air Act. Even if it is uncertain whether or not an exceedance did occur during startup, it is crucial for Permittees to maintain detailed and accurate records of these instances because such records could help IPGC shed light on future complications that may occur during startups or determine whether corrective or preventative measures are needed. As the Statement of Basis notes, "[t]he intent of this condition was to require additional documentation and explanation for boiler startups that are out of the ordinary or atypical." Statement of Basis at 34. It is contrary to the intent of the provision, and to the aim of the Title V program overall, to reduce the recording of when such abnormal behavior may have occurred. Therefore, the language of Condition 7.1.9(h)(ii)(B) of the 2013 Permit should be retained.

**Response:**

The revisions to Condition 7.1.9(h)(ii)(B) appropriately clarify when and how particular judgment must be exercised by the source in determining whether it must keep certain records for a startup, as required by this condition.<sup>69</sup> It should be noted that, in addition to requiring the subject records be kept for "likely exceedances" of the state PM standard during startup, this provision also requires the source to keep the specified records for actual exceedances of relevant state emission standards. As such, the aspect of this condition addressed by this comment involves additional recordkeeping that are required by the permit as it requires that the subject records be kept for likely PM exceedances.

As recognized by the 2013 CAAPP permit, the circumstances surrounding PM emissions during startup of a coal boiler at Coffeen are such that an objective determination whether the state PM standard has been exceeded may not always be possible. This is because PM emissions and compliance can be affected by the operation of the ESP, as well as the operation of the boiler itself. The circumstances for PM are also different than those for CO and opacity, the other pollutants for which the source has requested that the permit address possible exceedances of state emission standards during startup.<sup>70</sup> CO emissions only depend on operation of

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<sup>69</sup> This condition requires the source to keep detailed records for an "exceedance" of a state emission standard during startup, including a description of the exceedance, a description of the actions taken in response to the exceedance and an explanation whether actions could be taken to prevent similar incidents in the future.

<sup>70</sup> Exceedances of the state SO<sub>2</sub> emission standard, 35 IAC 214.184, during startup are not relevant because the boilers burn compliant coal. Compliance is not dependent on the performance of either a boiler itself or its scrubber.

Exceedances of the state NO<sub>x</sub> emission standard, 35 IAC 217.706(a), are also not relevant during startup. This standard applies to the average NO<sub>x</sub> emission rate over the ozone control period. As such, this standard cannot be exceeded during individual startups.

the boiler and not on add-on control devices.<sup>71</sup> While opacity depends on both operation of the boiler and the ESP, the opacity from each boiler is continuously monitored. Because it may not be feasible to make an objective determination whether an exceedance of the state PM standard occurred during startup, the initial permit required the subject records for startups in which "an exceedance from a relevant standard did or may have occurred during startup."

This requirement was overly broad as it applied to pollutants and standards other than for PM. As discussed above, the concern for exceedance of standards that "may" have occurred related to PM emissions. Accordingly, this condition has been revised so that the requirement to also keep records for possible exceedances during startup only applies for exceedances of the PM standards.

The initial requirement was also overly broad as it required the subject records for startups in which an exceedance of a standard "may" have occurred. The word "may" can be construed to encompass the possibility that something could have occurred, even if it is very unlikely to have occurred. This meaning was clearly not intended since the records that are at issue are "additional records," which must be kept only for the startups that meet specific criteria.<sup>72</sup> However, it is appropriate that more precise language be used in this condition to specify when the subject records must be kept for possible exceedances. This has been accomplished by replacing the phrase "may have occurred" with the phrase "compliance with the PM standard was likely not maintained." This confirms that the source must use reasonable judgment in considering whether the PM standard may have been exceeded during a startup if this cannot be determined objectively.

The claim made in this comment, i.e., that the subject records have been required for startups whenever there is "any uncertainty as to whether a deviation had occurred," is erroneous. This interpretation of Condition 7.1.9(h) (ii) (B) in the initial permit would effectively require the subject records be kept for all startups. From a theoretical perspective, if compliance with the PM standard cannot be objectively determined during a startup, there is always some uncertainty as to whether an exceedance occurred. As discussed, the structure of the conditions addressing recordkeeping for startup of the boilers clearly shows that the subject records are not required for all startups; they are only required for startups that meet specific criteria. Condition 7.1.9(h) (ii) (B) has been appropriately revised to make clear that, in addition to startups in which an exceedance of a state standard has occurred, the subject records must also be kept for startups when it is likely that an exceedance of the PM standard occurred.

This clarification does not affect other records that are required for startups, i.e., records to address "boiler startups that are out of the ordinary or atypical." This aspect of startups of the boilers

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<sup>71</sup> Emissions of CO during startup are also addressed, as Condition 7.1.9(h) (ii) (A) (ii) generally requires that the source keep records for departures from its standard procedures for startup and the reason why the standard procedures could not be followed.

<sup>72</sup> Condition 7.1.9(h) (ii) (A) requires that the source keep certain records for all startups of the boilers.



is addressed by the other recordkeeping required for startups. Conditions 7.1.9(h) (ii) (A) requires the source to keep records to address departures from written procedures for startups of the boilers. Conditions 7.1.9(h) (ii) (C) requires recordkeeping for startups that are prolonged.

15. **Permit Condition:** 7.1.9(i) (ii) (D)

**Comment:**

Condition 7.1.9(i) (ii) (D) of the Draft Permit requires that records of possible exceedances of hourly PM limits must be created only "if...the Permittee *believes* that compliance with an applicable hourly PM standard, as listed in Condition 7.1.4(g), likely was not maintained." (emphasis added). This permit condition is vague, subjective, and unenforceable and thus falls short of Title V's requirements. As USEPA has explained,<sup>73</sup>

A permit is enforceable as a practical matter (or practically enforceable) if permit conditions establish a clear legal obligation for the source [and] allow compliance to be verified. Providing the source with clear information goes beyond identifying the applicable requirement. It is also important that permit conditions be unambiguous and do not contain language which may intentionally or unintentionally prevent enforcement. USEPA Region 9, Title V Permit Review Guidelines (Sept. 9, 1999), at III-46.

What the permittee "believes" or not, and the basis of that belief, is subjective and not readily ascertainable from any records that otherwise must be kept for the Coffeen Plant. To determine what the Permittee "believes" would require, at minimum, expensive and time-consuming legal proceedings such as a deposition of company employees; and even then, it is not wholly clear which employee's belief would be controlling. In short, this permit condition is subjective, vague, and therefore, unenforceable. It thus does not meet Title V's requirements and must be revised.

In revising this condition, Illinois EPA should specify that certain objective criteria trigger the recordkeeping requirements under Condition 7.1.9(i) (ii) (D) (I) and (II). Those objective criteria might include, for example, times when the opacity and other parameters of the CAM plan deviate from required levels or a certain number of fields of the Coffeen ESP are out of service. The permit should include recordkeeping requirements for those criteria.

**Response:**

**The changes to the permit requested by this comment are not appropriate. In addition to the circumstances in which the subject records are required that are addressed by this comment, the subject records are required if emissions exceed an applicable hourly standard. As such, consistent with the cited USEPA guidance, Condition 7.1.9(i) (ii) (D) includes a clear and unambiguous criterion**

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<sup>73</sup> See also *In the Matter of Cash Creek Generation, LLC*, Permit No. V-09-006, 2012 EPA CAA Title V Lexis 5, \*94-\*96 (USEPA June 22, 2012) (granting petition to object on the grounds that Title V/PSD permit condition was too vague to be enforceable).

for when the source must keep the subject records that goes beyond the applicable requirement itself.

Moreover, this comment does not show that it is not appropriate for the permit to also require that the source keep the subject records for a malfunctions or breakdown when it believes that compliance with an applicable hourly PM limit likely was not maintained during the incident. As already discussed, there may be circumstances for the coal boilers for PM emissions in which compliance with the state PM standard may not be able to be objectively determined. For those circumstances, as the obligation for recordkeeping directly applies to the source, the source must necessarily make the decision whether the particular records must be kept for an incident. However, the permit also requires that the source must continuously monitor the opacity of emissions from the boilers and keep certain other records for the operation of the ESPs on the boilers. The subject provision does not prevent the Illinois EPA or USEPA from conducting evaluations into the PM emissions during a malfunction or breakdown irrespective of whether the source believed that compliance with the PM standard was maintained during an incident. As such, the subject provision does not act to prevent appropriate enforcement for exceedances of the state PM emission standard.<sup>74</sup>

This comment does not show that in place of requiring the subject records for incidents when compliance with the PM standard likely was not maintained, the permit should establish objective criteria for incidents when the Illinois EPA considers that compliance with the state PM standard likely would not be maintained and the subject records must be kept. While such criteria could be readily followed by the source, such criteria would not necessarily appropriately identify when there was a likely exceedance of the PM standard and the subject records should be kept. Such criteria might also be improperly construed as an official determination by the Illinois EPA for when a boiler should or should not be considered to comply with this standard. In summary, as related to the subject records, the permit appropriately places the obligation to identify likely exceedances of the PM standard on the source.

16. Permit Condition: 7.1.10-2(b) (iii) (D)  
Related Condition: 7.1.10-2(d) (iii) (A) (IV)

Comment:

Condition 7.1.10-2(b) (iii) (D) of the Draft Permit would change IPGC's obligations when reporting excess SO<sub>2</sub> emissions. Currently, it is required to provide "a detailed explanation of the cause of the excess emissions." 2013 Permit at Condition 7.1.10-2(b) (iii) (D). Under the Draft Permit, in contrast, IPGC would only be required to submit a report that explains the cause of the excess emissions "if known." Draft Condition 7.1.10-2(b) (iii) (D). The "if known" language gives IPGC an incentive to avoid investigating the cause of excess SO<sub>2</sub> emissions. If IPGC does not understand the root cause of excess

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<sup>74</sup> Whether the source kept the subject records for an incident would be an incidental matter in any enforcement action. The nature of this recordkeeping requirement is clearly different from the requirement that the source conduct continuous monitoring for opacity and keep certain operational records. Those requirements clearly apply at all times, addressing both compliant and noncompliant operation of the boilers.

emissions, it cannot address that root cause to prevent the same problem from recurring, resulting in preventable SO<sub>2</sub> emissions.

The Statement of Basis explains that revisions to Condition 7.1.10-2(b)(iii)(D), including this specific revision at issue, would be made to be consistent with the requirements for reporting causes of excess opacity in Condition 7.1.10-2(d)(iii)(A)(IV) of the Draft Permit. Statement of Basis at 38. That condition suffers from the same flaw, and there is no reason why the condition concerning SO<sub>2</sub> need mirror the Condition concerning opacity. Simply put, it is illogical and inconsistent with the CAA to remove a requirement that a permittee seek out the causes of exceedances simply to keep language consistent. The issued permit should ensure the Permittee determines the cause of excess SO<sub>2</sub> emissions.

**Response:**

**This comment does not show that it is inappropriate for conditions of the CAAPP permit that require reporting of the cause of an exceedance to generally recognize that certain exceedances may occur for which the source may not be able to identify a cause or causes. As the source must still report the occurrence of the exceedance itself, information is still reported that would enable the Illinois EPA or USEPA to evaluate such exceedance and determine whether it is reasonable that the source was unable to identify a cause or causes for the exceedance.<sup>75</sup>**

17.   **Permit Condition:**               7.1.10-3(a)(ii)  
      **Related Conditions:**       7.1.9(i)(ii)(A), (B) and (D)

**Comment:**

Draft Condition 7.1.10-3(a)(ii) would weaken reporting requirements for the plant for malfunction or breakdown. The 2013 Permit delineated several reporting requirements for these incidents. The Draft Permit would remove this list of reporting requirements and instead requires IPGC to report solely the information that was required under Condition 7.1.9(i)(ii)(A), (B) and (D) of the 2013 Permit. One of the reporting requirements that would be removed is reporting on cause. In contrast to the 2013 Permit, the draft condition would not explicitly require IPGC to report the cause of a malfunction or breakdown.

As discussed above, limiting IPGC's responsibility to determine the cause of problems creating excess emissions (which malfunctions and breakdowns often do) effectively leads to an increase in emissions that could be prevented if IPGC investigated and addressed the root cause. The Draft Permit should accordingly be revised to explicitly require IPGC to report the cause of a malfunction or breakdown.

Furthermore, former Condition 7.1.10-3(a)(ii) used to require reporting when the PM emission standard *may* have been exceeded during continued operation during malfunction or breakdown. However,

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<sup>75</sup> Key factors in such an evaluation would likely be the magnitude, duration and frequency of the exceedances. It is reasonable to expect the cause or causes of exceedances that are large, continue for a period of time or are repeated could be identified. This is because more information would be available to consider the possible cause or causes of the incident.

Condition 7.1.10-3(a)(ii) of the Draft Permit only requires reporting if the PM standard was exceeded. Condition 7.1.10-3(a)(ii) should require IPGC to report when the PM emission standard may have been exceeded. Such reporting would provide the Illinois EPA with more information about operations during malfunctions or breakdowns and would hold IPGC accountable for exceedances that may have occurred and would otherwise go unreported.

**Response:**

It is appropriate for Condition 7.1.10-3(a)(ii) to be revised as was generally proposed. The reports required by this condition should entail submittal of the information for the subject incidents for which the source must keep records pursuant to Condition 7.1.9(i)(ii). These reports should not be required to include information for which records are not required to be kept. However, Condition 7.1.10-3(a)(ii) of the 2013 permit inadvertently included a separate listing of the information that was required to be submitted and this listing did not match the listing of information for which records were required in Condition 7.1.9(ii).

As observed by this comment, when making this correction to the reporting requirements in Condition 7.1.10-3(a)(ii), it is appropriate that the causes for exceedances still be addressed in the specified reports. As the causes of exceedances were not addressed by the related recordkeeping in the draft permit, this has been appropriately addressed in the issued permit. New Condition 7.1.9(i)(ii)(D)(I)(2) now requires that the records for a subject exceedance or incident include a detailed explanation for the probable cause of the incidents.

This comment does not show that Condition 7.1.10-3(a)(ii) should continue to specifically require the subject reports be submitted for incidents for which the source finds that compliance with the PM standard likely was not maintained. This condition implements reporting requirements under 35 IAC Part 201 Subpart I, Malfunction and Breakdown. The relevant provisions in 35 IAC 201.263 only mandate reporting for an exceedance of a state emission standard; not for likely exceedances. Accordingly, if the source desires any benefits that derive from 35 IAC Part 201 Subpart I for a likely exceedance of the PM standard, it must as a practical matter submit the specified report. However, the permit should not dictate submittal of such a report. To do so would potentially put in place regulatory benefits for such an incident, such as they may be, that the source would not otherwise seek.

18. Permit Condition: 7.1.11(c)(i)

**Comment:**

Please update Condition 7.1.11(c)(i) by deleting the phrase "and boiler cleaning residue."

**Response:**

As requested, the phrase "and boiler cleaning residue" is not included in the issued permit. The boilers do not burn this liquid material, which is generated when the tubes in the boiler are cleaned to remove deposits and maintain the thermal efficiency of the boilers.

19. Permit Condition: 7.1.12(a)(ii)(E)

Comment:

The Draft Permit would remove the requirement in Condition 7.1.12(a)(ii)(E) of the 2013 Permit that the source provide the Illinois EPA with notice at least 15 days before changing its recordkeeping and data handling procedures associated with its reliance on 35 IAC 212.123(b). The Statement of Basis states that this change in part would occur because "it was recognized that the specific aspect of the source's procedures that is of interest to the Illinois EPA is the type of short-term opacity data that is collected." Statement of Basis at 41. This is problematic. While we appreciate that Condition 7.1.12(a)(ii)(E) in the Draft Permit adds in the requirement that IPGC notify the Illinois EPA of its changes to the type of short term opacity data that is collected, if the recordkeeping and data handling practices associated with 35 IAC 212.123(b) are improperly executed, then the data that is of interest to the Illinois EPA can be incorrect. Thus, in order to determine whether or not the SIP has been satisfied, the issued permit should ensure that the Illinois EPA is notified of new recordkeeping and data handling practices. This notification should happen before these changes in practices occur to avoid any interference with proper recordkeeping and data handling procedures.

Response:

Upon further consideration, the Illinois EPA concluded that advance notice by the source, as would have been required for certain changes to its procedures by Condition 7.1.12(a)(ii)(E) in the initial permit, is not warranted. The key purpose of this condition was to ensure that the source was keeping appropriate short-term opacity for the boilers as is needed to implement 35 IAC 212.123(b). However, Condition 7.1.12(a)(ii)(A) clearly lays out the types of short-term opacity data that the source must record as it elects to rely on 35 IAC 212.123(b), i.e., either a continuous chart recording of measured opacity, a record of discrete measurements of opacity taken no more than 15 seconds apart, or a record of 1-minute average opacity data.

Moreover, it is unlikely that the Illinois EPA would be able to complete any review of a planned change within the 15 day period that would have been provided by the initial CAAPP permit. 35 IAC 212.123(b), which is part of Illinois SIP, does not provide that a source must obtain approval from the Illinois EPA prior to reliance on this alternative to the generally applicable opacity standard in 35 IAC 212.123(a).

Finally, the initial condition could potentially have been misinterpreted to extend to any change in procedures by the source, including changes in the personnel that reviewed opacity data or the scheduling of this review.

20. Permit Condition: 7.1.12(b)  
Related Condition: 7.1.9

a. Comment:

Condition 7.1.12(b) establishes that compliance with the PM limits in Condition 7.1.4(g) is determined through "continuous opacity monitoring in accordance with Condition 7.1.8(a), PM testing in accordance with Condition 7.1.7, and the recordkeeping required by Condition 7.1.9." Condition 7.1.9 contains all recordkeeping requirements for the boilers, associated controls, and associated monitoring equipment. Condition 7.1.12(b) should be revised to include only the portions of Condition 7.1.9 that are directly related to compliance with the PM limits.

**Response:**

The specific records that would be relevant to determining compliance with the PM limit are the records required by Conditions 7.1.9(b) (i), (b) (ii) and (b) (v), 7.1.9(a) (i) through (a) (iv), (c), (d) and (g) through (i). In response to this comment, this is now indicated in the issued permit. In addition, the word "relevant" is included to make clear that a combination of the information in these records could be relevant for the determination of compliance.

**b. Comment:**

Pursuant to 40 CFR 70.6(c) (1), Title V permits shall contain "compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with terms and conditions of the permit." The boilers are subject to the Compliance Assurance Monitoring (CAM) Rule at 40 CFR Part 64. Generally, monitoring developed under CAM meets the requirements for monitoring under 40 CFR Part 70. The CAM plan for the boilers includes operation of the Wet Flue Gas Desulfurization (WFGD) recycle pumps as an indicator of compliance in addition to the continuous opacity monitoring systems (COMs). However, there are no requirements related to the proper operation of the WFGD referenced in Condition 7.1.9 or 7.1.12(b). The PM compliance measures in Condition 7.1.12(b) should be revised to include monitoring and recordkeeping associated with the WFGD or a reference to where those requirements are found in the permit.

**Response:**

Recordkeeping is required for the WFGD recycle pumps in the issued permit in new Condition 7.1.9(b) (v).

**c. Comment:**

Condition 7.1.12(b): Please correct the cross-reference from Condition 7.1.8(a) to 7.1.8(e) as follows: "... in accordance with Condition ~~7.1.8(a)~~ 7.1.8(e) ...."

**Response:**

The cross-reference to 7.1.8(a) has been corrected.

**21. Permit Condition: 7.1.13(b) (ii) (A)**

**Comment:**

Condition 7.1.13(b) (ii) (A), which addresses the CAM plan, sets out the actions that IPGC is to take in response to excursions of indicator ranges. Essentially, the Condition requires IPGC to "restore operation of the [Boilers] (including the control device and associated capture system) to [their] normal or usual manner of operation as expeditiously as practicable in accordance with good

air pollution control practices for minimizing emissions." Draft Permit at Condition 7.1.13(b) (ii) (A). This standard does not provide enough detail to assure prompt correction of improper operation, and should be revised to include site-specific description of required responsive actions.

USEPA has emphasized the importance of responsive actions within a CAM plan:

[T]he Agency believes it is critical to underscore the need to maintain operation within the established indicator ranges. Therefore, the rule includes the requirement to take prompt and effective corrective action when the monitored indicators of compliance show that there may be a problem. Requiring that owners and operators are attentive and respond to the data gathered by part 64 monitoring has always been central to the CAM approach.

[I]t is essential to the CAM goal of ongoing compliance operation that part 64 require that owners or operators respond to the data so that any problems indicated by the monitoring are corrected as soon as possible.  
62 FR 54,931.

The CAM plan for the Coffeen Plant should include more detailed and enforceable requirements for responsive action. For opacity levels that threaten non-compliance with the PM emission limit, shutdown of the affected Boiler should be required. Additionally, the Permit should include a site-specific description of necessary responsive actions. Such requirements would be more enforceable than the currently vague reference to returning Boilers to their normal manner of operation "as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions."

**Response:**

**This comment does not justify any changes to draft Condition 7.1.13(b) (ii) (A). This condition simply reiterates the relevant language in 40 CFR 64.7(d) (1), which addresses how a source must respond to excursions or exceedances identified pursuant to its CAM monitoring.<sup>76</sup> As such, it is fully appropriate that this condition**

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<sup>76</sup> 40 CFR 64.7(d) provides:

(d) Response to excursions or exceedances. (1) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance

be included in the issued permit in the form in which it was set out in the draft permit without any changes. Moreover, when an exceedance or excursion is identified, the CAM Plan approved by the permitting authority should not predetermine the source's response based on the magnitude of the occurrence. As confirmed by 40 CFR 64.7(d)(2), the adequacy of a source's response to an exceedance or excursion is to be evaluated by a regulatory authority on a case-by-case basis.<sup>77</sup>

**22. Permit Provisions: Tables 7.1.13a and 7.1.13b**

**a. Comment:**

The CAM plans should be revised to include monitoring of other parameters of ESP performance in addition to opacity. Specifically, pursuant to USEPA guidance, the CAM plans should include monitoring of voltage and current for each ESP field. This additional monitoring is particularly appropriate for the coal-boilers because opacity and PM are measured at different points in the flue gas stream, making the correlation between them especially attenuated. In the USEPA ESP CAM Protocol,<sup>78</sup> USEPA described the difficulties of using opacity as an indicator for PM emissions, in general, due to the lack of a linear relationship between the two:

[O]pacity, a commonly used parameter, can indicate ESP performance. If the opacity is increasing, you can reasonably assume that PM emissions are increasing. What generally is not known on a quantitative basis is the magnitude of the mass emissions relative to any one opacity value or the increase in mass emissions relative to the increase in opacity. In addition, and perhaps most importantly, the relationship between opacity and mass emissions can vary significantly with the particle size distribution and refractive index of the ash particles. The properties of the particulate matter can be influenced by fuel changes and the number and location of ESP electrical sections in service.  
USEPA ESP CAM Protocol, at 3.

USEPA's "presumptively acceptable" approach provides that the source also should monitor not only opacity but also other ESP operating parameters, specifically, voltage and current for each ESP field, and run a calibrated computer model to calculate ESP efficiency when the opacity excursion level is triggered, ESP CAM Protocol at 4. See also USEPA, CAM Technical Guidance Document, App. A.25, Electrostatic Precipitator (ESP) For PM Control—Facility FF (June 2002), at A.25-2 (model CAM plan providing that "ESP secondary voltage and current are measured for each field to determine the

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procedures and records, and inspection of the control device, associated capture system, and the process.

<sup>77</sup> In practice, the Illinois EPA would expect that if the cause of an excursion is not readily apparent, an important aspect of such an investigation would be an examination of the operating parameters of the ESP, for which the permit requires monitoring be conducted, comparing the values of those parameters during the incident, the values of parameters leading up to the incident, and the typical values of parameters.

<sup>78</sup> USEPA, *Compliance Assurance Monitoring (CAM) Protocol For An Electrostatic Precipitator (ESP) Controlling Particulate Matter (PM) Emissions from a Coal-Fired Boiler*, Proposed (USEPA ESP CAM Protocol)

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total power to each ESP").<sup>79</sup> The CAM rules, 40 CFR 64.4(b)(5), provide that "presumptively acceptable monitoring" for purposes of a CAM plan includes "Presumptively acceptable monitoring identified in guidance by EPA."

**Response:**

The existence of the USEPA ESP CAM Protocol does not provide an adequate basis to conclude that the CAM plans submitted by the source for the coal boilers at Coffeen are deficient and to require CAM plans that address operating parameter of the ESPs, as requested by this comment. Under 40 CFR Part 64, a CAM plan must be designed to provide a "reasonable assurance" of compliance with as applicable emission limit.<sup>80</sup> The fact that the source could have been developed CAM plans that followed the approach contemplated by the USEPA ESP CAM Protocol does not show that the CAM plans that the source actually did develop, as addressed by the issued permit, do not provide a reasonable assurance of compliance.

Moreover, as discussed in this comment, the USEPA ESP CAM Protocol involves opacity, the operating parameters of an ESP and the efficiency or performance of an ESP. Opacity is used as a "screening" parameter and is used to define periods of elevated opacity when a specific evaluation of the performance of the ESP is needed based on the operating parameters of the ESP during such periods. For the purpose of this evaluation, the USEPA ESP CAM Protocol relies on the development and calibration of a computer model for the performance of the ESP. This model would then be used to determine ESP performance from the operating parameters of the ESP. As such, the USEPA ESP CAM Protocol does not rely directly on the operating parameters of an ESP but on the performance of an ESP as calculated using a computer model.<sup>81</sup> The source used a much simpler and more direct approach in its CAM plans for the coal boilers at Coffeen, using opacity as the indicator parameter. For the source, this approach avoids having to develop and calibrate computer models for the ESPs on the two boilers. This is simpler for the Illinois EPA because there is not a delay while the model is being run to determine whether there was an excursion during a period of elevated opacity. It is also simpler because the Illinois EPA does not have to verify the design and calibration of the computer models or evaluate the modelling that is conducted by the source for periods of elevated opacity.

The comment also claims that in the USEPA ESP CAM Protocol, USEPA indicates that opacity alone is not a good indicator of proper operation of an ESP. This is patently untrue as the protocol uses opacity as a screening indicator. While as a general matter, opacity

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<sup>79</sup> Available at <http://cfpub.epa.gov/oarweb/mkb/cam.cfm>.

<sup>80</sup> A CAM plan is not intended to provide enhanced monitoring such that there is a direct determination or measure of compliance with an applicable limitation. Indeed, if a source uses a "continuous compliance determination method" to determine whether an emission unit complies with a limitation, 40 CFR 64.2(b)(vi) provides that a CAM plan is not needed to address such limitation.

<sup>81</sup> The example CAM plan in the USEPA ESP CAM Protocol provides that "When the hourly opacity is outside the indicator range, there is no reporting or corrective action requirement relative to the PM limit, but the operator must run the EPRI ESPM computer model." USEPA ESP CAM Protocol, p. 13.

may not indicate the magnitude of mass emissions relative to any one opacity value, this does not mean that opacity cannot be used as the operating parameter in the CAM plan for a particular emission unit. In this regard, this protocol states that "...for any given ESP and boiler, opacity can serve as a very useful indicator to initiate additional action..." (USEPA ESP CAM Protocol, p. 3, emphasis added).

As a final point, it is noteworthy that the USEPA ESP CAM Protocol, which was only proposed by USEPA and never finalized, states that:

Use of this protocol is not required; you as source owners and operators may propose other PM monitoring approaches for ESP's controlling coal-fired boilers. Presumptively acceptable monitoring is not prescriptive.  
USEPA ESP CAM Protocol, p. 2 (emphasis added)

b. Comment:

The two coal-boilers, Boiler 1 and Boiler 2, are respectively subject to PM emission limits of 0.15 and 0.19 pounds per mmBtu of actual heat input in any one hour period. (35 IAC 212.203 and Condition 7.1.4(g).) Pursuant to 40 CFR Part 64, the Permittee must comply with a CAM plans that assure the boilers are in continuous compliance with these limits.

The source's CAM plans, which, in part, requires COMS as a surrogate for PM emissions, are found in Condition 7.1.13 and Tables 7.1.13(a) and (b). However, the CAM plans specify an averaging period of three hours instead of one hour, which would be consistent with the averaging period for the applicable PM limits. While the three-hour averaging period specified in the CAM plan would be consistent with the averaging period for a three-hour performance test under Illinois' SIP, this is not the case when PM (or its surrogate, opacity) data is being collected continuously through a COMS.

Specifically, since COMS data for the ESPs is collected continuously and there are one-hour mass emission limits, the averaging period used for the CAM plans indicator value for opacity in Condition 7.1.13 should be one hour. Without the appropriate averaging time, the monitoring is not sufficiently relevant to the time period that is representative of the boiler's compliance status with the applicable PM limits, as required by 40 CFR 70.6(a)(3)(B).

Response:

It is not inappropriate for the source to have used a three-hour period in its CAM plans for the boilers. In response to this comment, the CAM plans that are now fully approved by the issued permit use a rolling three-hour period.<sup>82</sup> The CAM plans that were

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<sup>82</sup> Running averages and block averages are different methods for calculating averages values from a segment of the data collected for a particular parameter. Block averages are calculated from separate, non-overlapping segments of data. For example, block daily averages could be calculated using the data from midnight to midnight in each calendar day, with a single average value calculated for each day. Running averages, also known as a rolling or moving averages, are calculated for "overlapping" segments of data, with the segment being shifted forward incrementally for each calculation. For example, rolling daily averages, rolled hourly, would be calculated for the periods from 1:00 am of the previous day to 1:00 am of the day, from 2:00 am of the previous day to 2:00 am of the day, from 3:00 am of the previous day to 3:00 am of the day, etc. As the daily averages

conditionally approved used a block three-hour period.<sup>83</sup> This change addresses this comment as it generally indicates that the CAM plans should address the boilers' compliance on an hour-by-hour basis. This is provided with a rolling three hour period because a separate determination is made for each hour, based on the average of opacity for that hour and the two preceding hours.<sup>84</sup>

The aspect of the PM emission standards that supports use of three-hour periods in the CAM plans is that, notwithstanding the language of 35 IAC 212.203, emission testing to determine compliance with these standards involves three separate test runs, each nominally one-hour in duration. As provided by 35 IAC 212.110 and 283.210, compliance is evaluated based on the average of the measurements in the individual test runs compared to the applicable standard. In other words, testing to determine compliance with the PM standards involves a three-hour averaging period. As a general matter, the use of three separate test runs is considered necessary to assure a credible measurement of emissions that is appropriately relied upon to assess compliance or to quantify emissions.<sup>85</sup> It follows that opacity should also be evaluated as a three-hour average, consistent with the time period over which testing for PM emissions is conducted.

The PM testing that was conducted pursuant to the conditional approval of the CAM plans further confirms that use of a three-hour average of opacity is appropriate in the CAM plans. This is because the individual hourly values for opacity for the scenarios with higher PM emissions varied significantly.<sup>86</sup> For example, for Boiler 1, for the scenario with only 9 out of 15 sections of the ESP in service and normal WFGD operation, the hourly opacity values in the individual runs were 18, 20 and 25 percent. Given the variability in

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are rolled hourly, 24 hour separate values would be calculated for each operating day, with a different calculation made for each hour.

<sup>83</sup> This change was the result of a request by the Illinois EPA that IPGC change the time period in the CAM plans to a three-hour rolling average.

<sup>84</sup> Even though the CAM plans use a three-hour period, an excursion could theoretically occur and corrective actions be triggered by the hour in which the hourly opacity exceeds 30 percent. In a situation involving a sudden problem with an ESP, the three-hour average opacity could easily exceed 30 percent for the hour in which the problem occurs. (For example, if the opacity in the previous two hours was 26% and 24%, opacity of 43% in the hour in which the problem occurs would result in a three-hour average opacity of 31%.) Similarly, in a scenario involving a gradual problem with an ESP, the three-hour average opacity could exceed 30 percent for the hour in which the opacity exceeds 30 percent. (For example, if the opacity in the previous two hours was 28% and 30%, opacity of 35% in an hour would result in a three-hour average opacity of 31%.)

<sup>85</sup> The use of multiple test runs, with independent measurements of emissions, protects against the basic uncertainty that would be present with USEPA methods for testing PM emissions if only a single test run were required. The results of a single run could be "off," either high or low, based on errors in carrying out the test. Multiple runs serve to confirm the proper implementation of test methodology. Multiple runs also serve to address the range of uncertainty, again both high and low, that may be present in individual test measurements, even when conducted properly.

<sup>86</sup> The hourly opacity values for the scenarios with lower PM emissions had less variability. For example, for the normal operating scenario for Boiler 1, with 14 of 15 sections in the ESP in service, the hourly opacity values were 10, 10 and 11 percent. However, the scenarios in which PM emissions are higher are the ones that are relevant for assessing whether the time period for opacity data used in the CAM plans should be one hour or three hours.

measured opacity for this scenario, the measured PM emission rate of the boiler for this scenario, 0.0079 lb/mmBtu, is appropriately linked to the average of the hourly opacities, i.e., 21%. (Incidentally, the measured PM emission rate for this scenario with "higher PM emissions" was still less than 5 percent of the applicable state standard.)

A review of the CAM rules, 40 CFR Part 64, does not show that the time period used in a CAM plan must match the period that is implied by the language of the applicable emission standard. Rather, this period should be consistent with the time period in which a change in the operating parameter that would indicate an excursion would be observed.<sup>87</sup> As applied to the coal boilers at Coffeen, this accommodates use of a three hour period in the CAM plans. As discussed, the PM testing that was conducted pursuant to the conditional approval of the CAM plans shows the individual hourly values for opacity for the scenarios with higher emissions varied significantly. This variability supports the use of a three-hour period in the CAM plans. That is, as related to the state PM standards, it is not unreasonable to identify an excursion that requires corrective actions for the ESP using a three-hour period.<sup>88</sup>

USEPA's ESP CAM Protocol also indicates that, if appropriately justified, CAM plans for ESPs on coal boilers can use a period as long as three hours. As discussed, the PM testing conducted for the coal boilers shows it was reasonable for the source to have selected a period of three hours in its CAM plans:

You may use a different averaging period [longer than one hour], but you must justify a longer averaging time with additional supporting information. Such information will include data showing low emissions and opacity variability and a large margin of compliance under almost all operating conditions. In no case should you select an opacity-averaging time longer than 3 hours.

USEPA ESP CAM Protocol, p. 6

c. Comment:

In addition to monitoring opacity, the CAM plans require IPGC to monitor the WFGDs for the number of scrubber recycle pumps in

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<sup>87</sup> In this regard, 40 CFR 64.3(b)(4)(i) provides that:

At a minimum, the owner or operator shall design the period over which data are obtained and, if applicable, averaged consistent with the characteristics and typical variability of the pollutant-specific emissions unit (including the control device and associated capture system). Such intervals shall be commensurate with the time period over which a change in control device performance that would require actions by owner or operator to return operations within normal ranges or designated conditions is likely to be observed.

<sup>88</sup> It should be understood that as the CAM plans relate to the state PM standards, they only address excursions and corrective actions relative to these standards. Separate from the CAM plans, the source must take corrective actions for a boiler in response to an excursion of the state opacity standard, 35 IAC 212.123. This standard generally limits opacity to 30 percent on 6-minute average, consistent with the methodology in Method 9. Accordingly, in practice, the source would need to take corrective actions for the boilers to address compliance with the opacity standard well before such actions would be required under the CAM plans relative to the state PM standard.

service. See Permit, Tables 7.1.13a and b. Per the plans, the number of pumps in service is to be determined from the amperage of the motors powering the pumps. The number of pumps in service is meant to provide "an indicator of scrubber flow and an indicator for operating level." However, based on USEPA guidance, monitoring only the scrubber recycle pumps is insufficient to assure compliance with PM emission limits. USEPA has made clear that "monitoring which fails to take into account significant process or control device parameters is unlikely provide the reasonable assurance of compliance with emissions limitations or standards." (62 FR 54,919, Oct. 22, 1997.) While the WFGDs were installed primarily for SO<sub>2</sub> control, the CAM plan is relying on them for PM control. For instance, even with its ESP detuned, the Illinois EPA has indicated that the boiler can meet its PM limit. Statement of Basis at 25, 26.

With respect to wet scrubbers used for PM control, USEPA has stated:

Several parameters can be used as indicators of wet scrubber performance .... For PM control, the primary indicators of wet scrubber performance are pressure differential and scrubber liquid flow rate. Other parameters that can indicate wet scrubber performance include gas flow rate, scrubber liquid solids content, scrubber outlet gas temperature, and scrubber liquid makeup or blowdown rates.

USEPA, *CAM Technical Guidance Document*, Appendix B: CAM Illustrations, B.4, *Wet Scrubbers*, No. 4a *Wet Scrubber for PM Control* (April 2002), at B-28.<sup>89</sup>

In light of this guidance, the CAM plan should require IPGC to monitor at least one additional indicator beside pumps in service, such as liquid flow rate, pressure differential, gas flow rate, scrubber liquid solids content, scrubber outlet gas temperature, or scrubber liquid makeup or blowdown rates. Accurate monitoring of scrubber operation is particularly important here because of the attenuated relationship between opacity and PM for the boilers. As written, the CAM plan's monitoring does not "provide the reasonable assurance of compliance with emissions limitations," as required by USEPA. See 62 FR 54,919. It is critical that the CAM plan ensure proper operation and maintenance of both PM control devices.

**Response:**

**This comment shows that as CAM plans for the coal boilers addressed by the draft permit addressed the WFGDs as control devices for PM emissions, as well as the ESPs, these plans potentially did not satisfy the monitoring design criteria for CAM plans in 40 CFR 64.3. The USEPA guidance for scrubbers used as PM control devices cited by this comment indicates that if the WFGDs are to be relied upon as PM control devices for purposes of CAM, the pressure drop across the scrubber should be considered as an indicator for the performance of the scrubber, along with the liquid flow rate. The CAM plans did not include indicator value(s) for pressure drop nor did IPGC provide any analysis explaining why pressure drop should not be addressed in**

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<sup>89</sup> Available at [http://www.epa.gov/ttnchie1/mkb/documents/Scrub\\_B.pdf](http://www.epa.gov/ttnchie1/mkb/documents/Scrub_B.pdf).

these CAM plans.<sup>90</sup> As such, this comment shows that it is not appropriate for the CAM plans that Coffeen has submitted to address PM emissions of the boilers to rely on the scrubbers as control devices for PM emissions.

Accordingly, in response to this comment, the Illinois EPA requested that IPGC simplify its CAM Plans by no longer addressing the WFGDs as control devices for PM emissions. Coffeen agreed, submitting appropriate revisions to its CAM Plans. The revised CAM Plans that have now been fully approved in the issued permit only address the operation of the ESPs. This increases the stringency of the CAM plans since an excursion or exceedance of the PM limit by a boiler will be determined from the value of a single parameter, opacity. Under the previous CAM plans, which were conditionally approved, the values of two parameters, opacity and number of scrubber pumps in service, would have had to have been outside the designated values in the CAM Plans before an excursion or exceedance would occur. The CAM Plans that have now been finally approved by the revised permit provide that an excursion will occur if the indicator value for opacity is exceeded irrespective of the minimum number of scrubber pumps that are in operation.

It is also noteworthy that the emission testing that was conducted does not show that relationship between the opacity and PM emissions of the boilers is significantly affected, as suggested by this comment, because opacity is monitored in the ductwork downstream of the ESPs. While the highest PM emission rates from the boilers were measured while with boilers were operated with the greatest de-tuning of the ESPs and the minimum number of scrubber pumps in service, these PM emission rates were also accompanied by the highest levels of monitored opacity.

d. Comment:

For these coal boilers, the correlation of opacity to PM emissions is less robust than that of coal-boiler without WFGDs because of the intervening effect of the WFGDs in the control train. While opacity is measured at the output of the ESPs, PM is measured through testing in the stack after the flue gas streams has also passed through the WFGDs. This complicates establishing a relationship between opacity and PM emissions. While the ESPs are the primary PM control devices, the WFGD also will impact PM emissions.

For instance, upsets of the WFGD could result in an increase in PM emissions. Upsets that could increase PM loading include the pH of the scrubbant being too low, indicating insufficient  $\text{CaCO}_3$  in the scrubbant; gas velocity through the mist eliminators being too high, with aerosol carryover; and poor management of the level of solids in the scrubbant, such that there is too much or too little  $\text{CaCO}_3$  to achieve the design  $\text{SO}_2$  removal. Upsets such as these further skew the correlation between PM and opacity such that there would be an

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<sup>90</sup> In fact, as the CAM plans in the draft permit addressed the number of scrubber recycle pumps in service, the plans indirectly addressed the liquid flow rate of the WFGDs. The liquid flow rate of the WFGDs is determined by the amount of material that these pumps send into the spray headers in the WFGDs. The pumping rate can be monitored indirectly from the amperage or electrical current being drawn by the motors that power these pumps.

increase in PM emissions, without a related increase in opacity, and opacity monitoring could fail to indicate a potential PM exceedance. Because of the less robust relationship between opacity and PM, the CAM plans should follow USEPA guidance and include monitoring of the ESP fields' voltage and current in addition to opacity, in order to assure that the ESPs are properly operated and maintained.

**Response:**

The relevant issue for the CAM plans is whether there is an adequate correlation between opacity and PM emissions so that the plans provide a reasonable assurance of compliance with the applicable state PM standards. The testing of PM emissions that was conducted for the coal boilers pursuant to the conditional approval of the CAM plans show that this is the case, especially with the selected indicator value of 30 percent for opacity.<sup>91, 92</sup>

Upsets in the operation of a WFGD, as speculated upon by this comment, might result in higher PM emissions from a boiler. However, if the ESP is operating properly to control PM emissions as is addressed by the CAM plans, it is not realistic to expect that such upsets could cause a PM exceedance. This is because of the compliance margin that is now present for the PM standards, as shown by the results of the PM testing that was conducted.<sup>93, 94</sup>

**e. Comment:**

The monitoring for Coffeen and its plans for taking appropriate action for exceedances should be greatly improved. There are real concerns regarding the CAM plan that the Illinois EPA must address and critically improve and bring up to best practices for requirements for monitoring and reporting and for actions in response to problems.

**Response:**

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<sup>91</sup> The testing of the coal boilers for PM emissions shows that operation of the ESPs is the governing factor in their PM emissions and monitored opacity correlates well with the PM emissions of the boilers. The test results indicate that, if anything, the WFGDs act to further lower PM emissions below the levels that would be indicated by the monitored levels of opacity. As such, the WFGDs do not need to be addressed as PM control devices for purposes of CAM.

<sup>92</sup> In addition, if as an academic matter, one desired to develop a "more robust" correlation between the operation of the control devices on these boilers and their PM emissions, it would be reasonable to focus on the operation of the WFGDs and their role in further controlling or contributing to PM emissions. It would not be reasonable to focus on further operational monitoring for additional operating parameters of the ESPs, as recommended by this comment. This because the performance of the ESPs is directly addressed by the required opacity monitoring.

<sup>93</sup> Based on the highest emission rate measured for the boilers during the PM testing, i.e., 0.013 and 0.0122 lb/mmBtu for Boilers 1 and 2, respectively, even if upsets in the operation of the WFGDs increased PM emissions of the boilers by a factor of ten, the boilers would still comply with the applicable state PM standards.

<sup>94</sup> Moreover, as this comment speculates on upsets in the operation of the WFGDs that might affect PM emissions, it points to matters that would not be addressed by operational monitoring for gas flow rate or pressure drop. As such, it points to aspects of the operation of the WFGDs that would not be addressed by the operational monitoring that is recommended by USEPA's guidance for scrubbers that are used for control of PM emissions. At the same time, as these upsets of the WFGDs would involve aspects of operation that affect SO<sub>2</sub> emissions, these upsets would be identified by the monitoring of SO<sub>2</sub> emissions that is conducted for the boilers.

The issued permit appropriately addresses the emission standards and requirements that currently apply to Coffeen. There were not gaps in the draft permit for which "great improvements" were needed, as assumed by this comment. As comments were submitted about specific provisions, the Illinois EPA has considered those comments and the issued permit reflects minor improvements where appropriate. For example, as already discussed, in response to specific comments about the CAM plans for the boilers, the operation of the recycle pumps in the WFGDs is no longer used in the CAM plans as an indicator for PM emissions, only opacity. This change is the result of a technically based analysis, considering the regulatory requirements for CAM plan in 40 CFR Part 64. In practice, this change is unlikely to have any meaningful consequences for the PM emissions and compliance of the boilers as they comply with the state PM standard with a substantial margin of compliance.

## VII. Comments Regarding Conditions in Sections 7.2, 7.3, 7.4 and 7.5

- (7.2 - Coal Handling Equipment)
- (7.3 - Coal Processing Equipment)
- (7.4 - Fly Ash Handling Equipment)
- (7.5 - Limestone and Gypsum Handling Equipment)

1. Permit Condition: 7.2.5(b)

**Comment:**

In Condition 7.2.5(b), for clarity, please revise as follows: "... were not constructed, reconstructed or modified after October 27 1974, or May 27, 2009, as applicable."

**Response:**

The requested change has been made in the issued permit. As the USEPA proposed revisions to the NSPS for Coal Preparation and Processing Plants on May 27, 2009, the permit also should address construction, reconstruction and modification of coal handling equipment relative to this date.

2. Permit Condition: 7.2.6(a)(i)  
Related Conditions: 7.3.6(a)(i) and 7.4.6(a)(i)

a. **Comment:**

Conditions 7.2.6(a)(i), 7.3.6(a)(i) and 7.4.6(a)(i) in the draft permit pertain to control measures for coal handling, coal processing and fly ash handling operations. Each of these conditions states: "The Permittee shall implement and maintain the control measures for the affected [operations/processes]... for emissions of particulate matter to support the Periodic Monitoring for the applicable [emissions standards]." Please clarify what it means for a control measure to "support the periodic monitoring" for the applicable emission standards?

**Response:**

These provisions for control measures "support the periodic monitoring" as they serve to facilitate the Periodic Monitoring that is required by the permit for the subject operations. It is



much simpler to address the implementation of control measures on an ongoing basis than to confirm compliance with an opacity standard. Implementation of control measures can be addressed by appropriate records and routinely verified with inspections by personnel of both the source and the Illinois EPA. Pursuant to USEPA Reference Method 9, determinations of opacity can only be made by certified observers and only when the position of the sun or the source of light is such that observations can be made from an acceptable location.<sup>95</sup>

This phrase "support the periodic monitoring" also indicates that these requirements for implementation of control measures are not included in the permit to directly address compliance with the applicable emission limits. The emissions of the subject operations are currently such that compliance might be unaffected by an interruption or lapse in the implementation of the control measures for an operation. It would be incorrect to assume that such an interruption or lapse would result in an exceedance of the applicable emission limits for an operation.

Additionally, because the actual control measures used by Coffeen are not set out in the permit, Conditions 7.2.6(a)(ii), 7.3.6(a)(ii) and 7.4.6(a)(ii) in the issued permit now specifically refer back to Condition 5.2.7, which incorporates the Control Measures Record into the permit by reference.<sup>96</sup> This makes clear that the control measures that are identified in the Control Measures Record maintained by Coffeen are enforceable through the permit.

**b. Comment:**

Portions of these conditions were significantly weakened compared to the 2013 Permit. The 2013 Permit actually required Ameren to "implement and maintain control measures for the affected [operations/processes]...that minimize...visible emissions of particulate matter and provide assurance of compliances with the applicable [emissions standards]." The Statement of Basis claims that "[t]he new language would more clearly reflect the objective for these conditions, consistent with [the Illinois EPA's] intent in the current permit." Statement of Basis at 43.

However, as discussed later regarding USEPA's comments on the 2013 Permit, there are no specific monitoring requirements in Conditions 7.2.6(a)(i), 7.3.6(a)(i), and 7.4.6(a)(i) of the 2013 Permit, even though the Statement of Basis asserts that the intent of these conditions was to support monitoring.

In addition, the changes to the wording of those conditions as reflected in the Draft Permit alter both the purpose of these three

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<sup>95</sup> In addition, for the coal processing operations, which are subject to limits for PM emissions, ongoing compliance must be addressed considering the control measures that are implemented for these operations.

<sup>96</sup> For example, Condition 7.2.6(a)(ii) in the issued permit reads as follows, "...which record is incorporated by reference into this permit by Condition 5.2.7."

conditions and also significantly weaken them. Although these conditions in the 2013 Permit required control measures to minimize emissions, the proposed permit has no such requirement because, according to the Statement of Basis "the word 'minimize' is ambiguous and usually lacks regulatory meaning." Statement of Basis at 43 (although the Draft Permit nonetheless uses the word "minimize" in more than a dozen other places. See e.g. Conditions 7.4.9(e) (ii), 7.5.6(b) (i) (B), 7.5.9(e) (ii), 7.1.3(b) (i) and 7.1.3(b) (ii)). The meaning of the word "minimize" in the 2013 Permit is clear because it also requires emissions to be minimized to assure compliance with emissions standards. The Draft Permit no longer requires emissions to be minimized.

Furthermore, in the 2013 Permit, Ameren was expected to implement control measures that would provide assurance of compliance with applicable emission requirements. This phrase was removed because, according to the Statement of Basis, "[t]he phrase 'provide assurance...' is also vague." The meaning of that phrase in the 2013 Permit, however, was more than clear. Under the 2013 Permit, Ameren's control equipment would have been used to ensure that emissions standards were being met. To its detriment, the Draft Permit no longer requires the same of IPG's control measures in these conditions. The Draft Permit should be revised to put the phrase "provide assurance" back into those Conditions.

However, we are supportive of the changes to Conditions 7.2.6(a) (i), 7.3.6(a) (i) and 7.4.6(a) (i) compared to the 2013 Permit with those conditions now applying to all emissions of particulate matter rather than simply visible emissions of particulate matter. We support this broader applicability of these conditions.

**Response:**

These comments did not show that it was appropriate to retain the wording of the subject conditions in the 2013 permit that was proposed to be removed by the draft permit. In the context of these conditions, the use of the word "minimized" was not appropriate. It could be construed to mean emissions must be "reduced to the least amount possible" whereas the intended meaning was simply that measures must be implemented that "reduce the generation of emissions." The phrase "assure compliance" also was not appropriate. In the context of the subject permit conditions, the phrase is vague as it does not further address the degree of assurance that is required. It also does address how control measures are to be evaluated to demonstrate that they assure compliance. Moreover, it was recognized that the observations for visible emissions and opacity that are also required by the permit serve to confirm the adequacy of the control measures that the source has specified for the subject operations.

**c. Comment:**

Conditions 7.2.6(a), 7.3.6(a), 7.4.6(a) and 7.5.6(a) require the source to implement and maintain control measures for the subject material handling operations and lists examples of those measures, but does not require any specific control measures to be used. For example, Condition 7.2.6(a) states that

The Permittee shall implement and maintain the control measures for the affected operations, *such as* enclosure, covers, natural surface moisture, application of dust suppressant, and use of dust collection equipment....

As written, the draft CAAPP permit does not require the Permittee to use any specific control measures. The Conditions identified above should be revised to require the Permittee to implement and maintain the control measures required by the Control Measures Record. These revisions would ensure that the permit contains sufficient operational requirements to assure compliance with applicable opacity and PM limits for the affected operations, as required by 40 CFR 70.6(a).

**Response:**

The permit does require Coffeen to use specific control measures for the subject operations, contrary to what is suggested by this comment. While these control measures are not identified in the permit, the permit does require Coffeen to implement and maintain the specific control measures identified in the Control Measures Record. In particular, the subject conditions are followed by conditions that explicitly require the source to implement and maintain the specific control measures for these operations that have been identified in the Control Measures Record that are required by the permit.<sup>97</sup> For example, for the coal handling operations, following Condition 7.2.6(a) (i), Condition 7.2.6(a) (ii) provides,

The control measures implemented and maintained shall be identified and operated in conformance with the record required by Condition 7.2.9(b) (i) to satisfy Condition 7.2.6(a) (i).

3.   **Permit Conditions:**           7.2.7(a) (i) and 7.2.8(b)  
      **Related Conditions:**       7.3.7(a) (i), 7.3.8(b), 7.4.7(a) (i), 7.4.8(b)  
  and 7.5.7(a) (i)

a.   **Comment:**

To control emissions from material handling and processing equipment, the source uses, among other things, natural surface moisture, water atomized foggers, baghouses and dust suppression, as identified in the Control Measures Record, which is incorporated by reference into the permit by Condition 5.2.7(a). The permit contains inspection and monitoring requirements for this equipment, including requirements to perform monthly inspections, annual observations for visible emissions by Reference Method 22, and opacity observations by Reference Method 9 once every three years.

The draft permit's inspection and monitoring requirements are not adequate to yield reliable and accurate emissions data that are representative of the source's compliance with applicable PM and opacity limits, as required by 40 CFR 70.6(a) (3) (i) (B). The frequency of inspections and monitoring will not provide sufficient data to determine whether the control measures being used are

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<sup>97</sup> The Control Measures Record is also made part of the permit, as it is incorporated into the permit by reference by Condition 5.2.7.

adequate and whether alternative control measures must be employed. This is because, among other things, the majority of the affected equipment operates continuously, 365 days a year, the type of control measures used can fluctuate greatly, and weather conditions can have significant impacts on the adequacy of using natural surface moisture to control emissions. See also Comment 2 of USEPA's December 21, 2012 letter regarding the draft of the 2013 permit.

USEPA recognizes that the Permittee has conducted PM and opacity emissions testing that shows compliance with the applicable permit limits. However, the testing results do not contain enough data to provide a reliable and accurate picture of PM and opacity emissions from the subject equipment to justify the frequency of inspections. For example, opacity testing showed emissions from certain equipment was as high as 20 percent, which is concerning given that the equipment is subject to, among other things, a 30 percent opacity limit. Additionally, the PM testing did not address how the Permittee quantified PM emissions from the equipment. Furthermore, the testing information did not specify which, if any, of the control measures other than natural surface moisture the Permittee implemented during testing.

To address the above concerns, Conditions 7.2.8(b), 7.3.8(b), and 7.4.8(b) should require the Permittee to conduct a Method 22 test at least once per day for each affected operation during normal operation. These daily observations may be performed by the plant operators involved in day-to-day operations who decide on a daily basis whether to operate additional control measures. The permit should also identify appropriate next steps if emissions are observed, such as corrective action and/or Method 9 observations. Alternatively, the permit could require installation and operation of video monitoring equipment to monitor visible emissions from the coal and fly ash equipment and require appropriate next steps if emissions are observed.

**Response:**

In the issued permit, in response to this comment, an additional compliance requirement has been included for the coal storage pile operations (new Condition 7.2.8(c)). During warmer weather, May through November of each year, the issued permit requires the source to conduct a visual survey of these operations twice a month. From December through April, a visual survey is only required monthly. Each survey must include either an observation for visible emissions or for opacity.<sup>98</sup> For the storage pile operations, this provision addresses the potential role of weather, as mentioned in this

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<sup>98</sup> New Condition 7.2.8(c) provides that these visual surveys must include either observations for visible emissions or opacity from the coal storage pile. Observations for visible emissions must be conducted in accordance with 35 IAC 212.107, which provides that such observation must be conducted in accordance with USEPA Method 22. The total duration of observations for visible emissions must be at least 10 minutes. As an alternative to conducting observations for visible emissions, IPGC may elect to conduct an observation for opacity from the storage pile in accordance with USEPA Method 9, with at least one determination of opacity, 6-minute average, for the storage pile.

If visible emissions are observed going beyond the property line or the average of opacity observations is greater than 20 percent, this new condition requires that, within two hours, IPGC take action if needed to assure compliance with the 30 percent opacity standard in 35 IAC 212.123(a).

comment, in the emissions of the storage piles and the control measures that are implemented. In particular, during warm weather, water evaporates more quickly and the exposed coal at the surface of a pile will dry, reducing its natural moisture content and increasing its potential for emissions.<sup>99</sup> Inspections of the coal pile conducted twice a month during warmer weather to address this potential for higher emissions. For material handling operations other than the coal storage piles, the material is not exposed to the open air for an extended period of time at the source so that drying has, at most, a minimal effect on emissions.

In other respects, the frequency of the formal inspections that is required as part of the Periodic Monitoring for the subject operations is reasonable. With regard to the coal handling and coal processing and limestone handling operations, these operations have a long-standing history of compliance. They operate with a substantial margin of compliance. The control measures that address emissions from the units are robust. That is, they are not easily interrupted or damaged. Because of the rudimentary nature of the control measures, they are also not at risk of upsets if their operation is not closely tracked. The operation and performance of these operations and their control measures is also directly apparent to the staff that operate them on a day-to-day basis as part of the receiving, handling and storage of material. The required frequency of inspections is consistent with the standard requirement for compliance inspections for these types of operations in the NSPS for Coal Preparation Plants, 40 CFR 60 Subpart Y.<sup>100, 101</sup>

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<sup>99</sup> This provision is also considered appropriate as the source indicated that secondary control measures may be used for the coal pile "when handled coal is unusually dry."

<sup>100</sup> Under the NSPS for Coal Preparation Plants, 40 CFR 60 Subpart Y, for a subject facility that is subject to an opacity standard and is not controlled with a scrubber, 40 CFR 60.255(b)(2) provides that after the initial performance test or observations for opacity are conducted for new coal handling operation subject an opacity standard, periodic observations of opacity must be conducted as follows. The new facilities that are subject to these requirements are subject to an NSPS opacity standard of 10 percent, six-minute average, pursuant to 40 CFR 60.254. Accordingly, the criterion for periodic observations of opacity on a quarterly basis would be half of 10 percent, or 5 percent.

For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted ...

(i) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.

(ii) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

Daily observations for visible emissions and use of a digital opacity monitoring for subject facilities are not mandated by 40 CFR 60 Subpart Y. Rather, 40 CFR 60.255(f)(1) and (2) provides that the owner or operator of a subject facility may elect to monitor a subject operation using one of these approaches as an alternative to conducting opacity observations on a quarterly or annual basis, as appropriate.

<sup>101</sup> Under the NSPS for Nonmetallic Mineral Processing Plants, 40 CFR 60 Subpart I, for new non-metallic mineral handling operations whose fugitive emissions are subject to a 10 percent opacity standard and that use wet suppression to control emissions, 40 CFR

With regard to the fly ash handling operations, these operations have a history of compliance. They operate with a substantial margin of compliance. The filters that control emissions from the internal transfer and storage of fly ash are highly efficient. The nature of the fly ash and the low temperature and moisture content of the gas streams is such that the bin vent filters are reliable devices. They are also not at significant risk of upsets and their operation can be reasonably verified by formal inspections on a monthly basis. Monthly inspection would be more frequent than the quarterly compliance inspections that would be required for these types of operations if subject to the NSPS for Nonmetallic Processing Plants, 40 CFR 60 Subpart O.<sup>102</sup> As such, for the operations involved in the transferring and storage of fly ash at the source, it is reasonable that the formal inspections of these operations to confirm proper operation be required conducted on a monthly basis.

The circumstances for the load out of fly ash from the plant are different than those of other fly ash handling operations. Formal inspections of this operation are appropriately required on a weekly basis. For this operation, control of emissions is less robust as emissions are captured by a loadout snorkel. The position of the snorkel must be manually adjusted during load out and the snorkel could be subject to damage if not fully retracted when trucks enter and leave the loading area. Although the observed opacity from this operation is low, 3.13 and 3.33 percent, six-minute average, measurable opacity is present.<sup>103</sup>

Monthly inspections for the handling of gypsum are more than adequate. The gypsum is a wet material from the WFGD systems on the coal boilers. The potential PM emissions from handling of this material should be considered to be minimal.

As discussed in the comment, the source had observations for opacity conducted for these operations.<sup>104, 105</sup> The observations do not show

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60.674(b) requires inspections of the wet suppression systems on a monthly basis. These inspections are not required to include observations for visible emissions. In addition, these operations are exempt from the requirements to conduct periodic performance testing for opacity at least every 5-years, as would otherwise be required.

<sup>102</sup> Under the NSPS for Nonmetallic Mineral Processing Plants, 40 CFR 60 Subpart I, for new operations that are controlled by baghouses, 40 CFR 60.674(c) requires that observations for visible emissions be conducted on a quarterly basis. It is noteworthy that for each new operation controlled by a baghouse, NSPS limit the emissions from the baghouse to 7 percent opacity.

<sup>103</sup> In fact, Coffeen only had observations for opacity conducted and not tests for PM emissions, as indicated by this comment. The material handling operations are not subject to rules that in practice act to restrict PM emissions. For example, for emission units handling 500 tons of material per hour, 35 IAC Part 212 Subpart L allows PM emissions of 67.0 and 69.0 for new and existing units, respectively. For units handling 20 tons of material per hour, it allows PM emissions of 12.5 and 30.5 pounds/hour, respectively.

<sup>104</sup> For the Coal Handling Equipment, Coal Processing Equipment and Fly Ash Handling Equipment, as required by the 2013 CAAPP permit, the source submitted the report for opacity observations on October 9, 2014. The observations were conducted at Coffeen between July 28, 2014 and September 25, 2014. An environmental consultant, Hastings Engineering conducted the Method 9 opacity observations on emissions to verify compliance with the opacity limits for the subject equipment.

that these formal inspections should be required more frequently. While the operational conditions under which the opacity observations were conducted may not have been as well documented as the commenter, and the Illinois EPA, would have liked, this is not a reasonable basis to now mandate more frequent inspections of these operations.<sup>106</sup> In fact, measureable opacity was not observed from most of these operations. When appropriately considered on a six-minute average, consistent with the compliance averaging period of 35 IAC 212.123, the highest opacities that were observed were only 2.92 percent for coal storage piles and 3.33 percent for fly ash load out. These are well below the applicable standard pursuant to 35 IAC 212.123, 30 percent.

As to the suggestion in this comment that all required inspections should include observations for visible emissions, the comment is effectively asking that the permit impose a substantive requirement of the subject operations. This is because applicable rules do not prohibit visible emissions from the subject operations. The identification of the specific corrective actions that the source must take in the event of visible emissions would also constitute establishment of new substantive requirements in the permit.<sup>107, 108</sup>

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As required by the 2013 permit, Coffeen submitted its Control Measures Record for the Coal Handling Equipment, Coal Processing Equipment and Fly Ash Handling Equipment to the Illinois EPA on December 12, 2013.

<sup>105</sup> As also explained in the Statement of Basis, 38 observations of opacity were completed on emission points for units. All observations conducted demonstrated a significant margin of compliance with the applicable opacity limits in 35 IAC 212.123 and 40 CFR Part 60 Subpart Y. In particular, of 38 opacity observations conducted, only five observations exhibited any opacity greater than zero, the highest of which was 3.33 percent. A total of 24 opacity observations were completed for units subject to 35 IAC 212.123. There were five opacity results that were greater than zero, the highest of which was 3.33 percent opacity. All units were in compliance. A total of 14 opacity observations were completed for units subject to less than 20 percent opacity of 40 CFR Part 60, Subpart Y. Opacity was observed from a building enclosing multiple emission points. Because opacity would be associated with fugitive emissions that could be from any equipment inside, the lowest applicable opacity limit (less than 20 percent) standard was used to determine compliance. The opacity observed for each observation point was never greater than zero and all units were in compliance.

<sup>106</sup> Deficiencies of this type for observations and testing are appropriately addressed by further evaluation, investigation and, possibly, requiring that such observations or testing be repeated with additional documentation for the conditions during such observations or testing to be kept.

Upon evaluation, the Illinois EPA has concluded that it is not appropriate to require that these observations be repeated. It is reasonable to assume that during the period in which observations were conducted, these operations were being operated as they are normally operated and not in a way that was not representative of normal operation.

<sup>107</sup> It is also relevant that this comment has been made by USEPA several years after repeated discussions with staff at USEPA Region 5 concerning the basis for resolving the appeals of the initial CAAPP permits. These discussions between technical and legal personnel of USEPA and the Illinois EPA evolved around the appropriate refinements to the approach to Periodic Monitoring for the subject operations. As the Illinois EPA explained, the approach in the initial permits with annual observations of opacity by Method 9 was being reduced in frequency to accommodate a revised monthly inspection protocol, with the possibility for follow-up corrective actions of Method 9 observations. During these discussions, USEPA staff did not suggest that a reduction in the frequency of Method 9 observation would create an unworkable permit. Given the subsequent absence of comment or formal objection by USEPA during the last stages of the revisions to permits in 2012 and 2013, it was believed that the revised approach was acceptable.

Finally, video monitoring equipment is clearly not appropriate for the subject operations. Visible emissions are not prohibited by the applicable substantive requirements that do apply to the subject operations. The operations are not currently the cause of either a real or alleged dust nuisance.

b. Comment:

Conditions 7.2.7(a)(i), 7.3.7(a)(i), 7.4.7(a)(i) and 7.5.7(a)(i) should require Method 9 observations once per year, rather than once every three years. Requiring annual Method 9 observations will yield actual opacity readings that would provide the plant operators with information to evaluate the ongoing integrity and effectiveness of the control measures. As a result, the Permittee would be in a position to respond and take appropriate steps to avoid exceeding the applicable PM and opacity limits.

Response:

The purpose of the mandatory observations for opacity for material handling observations, which are addressed by this comment, is to require that Coffeen directly confirm compliance with the applicable opacity standard, 35 IAC 212.123(a), on a periodic basis. In this regard, these observations should be considered similar in function to the performance tests that are required under USEPA's NSPS and NESHAP rules. The purpose of these observations is not to address compliance on an ongoing basis, which is addressed by other requirements in the permit. These other requirements, i.e., the regular inspections of these units and the annual observations for visible emissions/opacity, provide the information that is needed to confirm the ongoing effectiveness of the control measures. Moreover, it is unclear how mandatory annual observations of opacity, as recommended by this comment, would provide timely information to enable Coffeen "to respond and take appropriate steps to avoid exceeding the applicable PM and opacity limits."<sup>109</sup>

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<sup>108</sup> While 35 IAC 212.301 addresses visible emissions of fugitive particulate matter, it does so at the property line of a source. 35 IAC 212.301 provides for the dispersal of fugitive emissions that occurs over plant property between the unit(s) generating the emissions and the property line of the source. In addition, 35 IAC 212.301 prohibits visible emissions of fugitive particulate matter only if they would be visible by an observer at or beyond the property line looking directly overhead. It does not prohibit fugitive emissions that are visible by an observer looking toward the source or along the property line. In addition, 35 IAC 212.314 provides that 35 IAC 212.301 is not applicable during periods of elevated wind, i.e., winds greater than 25 mph, on an hourly average.

Given these considerations, the nature of the subject operations and the applicability of 35 IAC 212.123, which directly limits the opacity of emissions from the subject operations, 35 IAC 212.301 is not expected to constrain the emissions of the subject operations in practice. However, a new condition has been included in the issued permit, Condition 5.2.2(a)(ii), to directly address compliance with 35 IAC 212.301. It provides that, upon request by the Illinois EPA, the source must conduct daily observations at the property line for a week to address compliance with 35 IAC 212.301. This requirement addresses the unlikely circumstance that the emissions from the subject operation(s) would be such that compliance with 35 IAC 212.301 might be put into question.

<sup>109</sup> It is also unclear what additional information would be provided by mandatory annual observations of opacity, beyond the information that is already required by the CAAPP permit, that would assist Coffeen in avoiding exceedances. Moreover, it is unclear why the permit should specify an action that Coffeen must take annually to avoid exceedances. As part of its day-to-day operation of material handling operations, Coffeen is obligated to taking appropriate actions on a timely basis as needed to avoid exceedances.



4. **Permit Conditions:** 7.2.7(a) (i) and 7.2.8(b)  
**Related Conditions:** 7.3.7(a) (i), 7.3.8(b), 7.4.7(a) (i), 7.4.8(b)  
and 7.5.7(a) (i)

a. **Comment:**

During the comment period for the 2013 permit, USEPA commented on Conditions 7.2.8(b), 7.3.8(b) and 7.4.8(b), which address inspection requirements for the coal handling, coal processing and fly ash equipment. USEPA stated that "the draft CAAPP permit inspection requirements are not adequate to yield reliable and accurate emissions data, as required by 40 CFR 70.6(a) (3) (i) (B)." (2013 Responsiveness Summary,<sup>110</sup> at 27). USEPA recommended that the conditions "...be revised to require the Permittee to conduct at least one daily 15-second observation each operating day for each affected operation (during normal operation). "If emissions are observed, the permit should identify the Permittee's next steps ...". In response, the Illinois EPA defended those conditions, pointing out:

A key component of the Periodic Monitoring is an on-going requirement that Ameren operate and maintain designated control measures for the equipment on an as-needed basis or, similarly stated, as necessary to assure compliance. This obligation, which is required whenever equipment is operating and material is being handled, is now codified in the permit, although various uses of control measures have long been practiced by Ameren and the other utility sources.  
2013 Responsiveness Summary, at 28 (footnotes omitted).

The Illinois EPA's response is inadequate for several reasons. First, the Illinois EPA claims that the language is "now codified in the permit" but it is unclear what language Illinois EPA is referring to. Conditions 7.2.6(a) (i), 7.3.6(a) (i) and 7.4.6(a) (i) of the 2013 Permit contain the specific language requiring control measures to "assure compliance" that the Illinois EPA may have been referencing in the 2013 Responsiveness Summary. However, the language of Conditions 7.2.6(a) (i), 7.3.6(a) (i) and 7.4.6(a) (i) of the Draft Permit is as follows:

The Permittee shall implement and maintain the control measures for the affected operations/processes . . . for emissions of particulate matter to support the periodic monitoring for the applicable requirements....

That change does little or nothing to address the concern because requiring control measures "to support the Periodic Monitoring" is as unclear and as unenforceable as control measures "to assure compliance." Allowing the Permittee to make the decision as to what measures "support periodic monitoring" renders these conditions subjective and, therefore, unenforceable by the Illinois EPA or a citizen who might have a different view as to what would support Periodic Monitoring. In addition, USEPA's concern that the Periodic

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<sup>110</sup> Illinois EPA, "Responsiveness Summary for the Significant Modification of the CAAPP Permit issued to Ameren for the Coffeen Energy Center," issued October 2013 ("2013 Responsiveness Summary").

Monitoring requirements are inadequate is not strengthened by a requirement for control measures adequate to support Periodic Monitoring. That simply makes these permit conditions circular.

In sum, the conditions that the Illinois EPA pointed to as addressing USEPA's concern are subjective, circular, unenforceable and do not adequately respond to USEPA's previous comment. USEPA's comment that the "CAAPP permit inspection requirements are not adequate to yield reliable and accurate emissions data, as required by 40 CFR 70.6(a)(3)(i)(B)," 2013 Responsiveness Summary at 27, still applies and we reiterate it as to the subject conditions in the draft permit.

**Response:**

The earlier USEPA comments cited by this comment do not include facts supporting its claim that the requirements of the permit for formal inspections of the material handling operations would not be adequate. This comment also does not include facts showing that the requirements of the permit would not be adequate and more frequent inspections are needed or appropriate for these operations. As already discussed, the aspect of this CAAPP permit that is relevant to the appropriateness of the required frequency of the inspections of the material handling operations is the requirement that Coffeen codify the control measures that it implements for the subject operations. In both the 2013 permit and this revised CAAPP permit, this requirement is addressed in the conditions that follow the subject conditions, i.e., Conditions 7.2.6(a)(ii), 7.3.6(a)(ii) and 7.4.6(a)(ii).<sup>111</sup> The revisions that have now been made to these conditions by the issued permit do not alter the obligation placed on Coffeen that it must implement the control measures for the subject operations that it specifies in a written document or record, i.e., the "Control Measures record," that it must prepare and submit to the Illinois EPA. Rather, the changes to these conditions enhance the enforceability of the measures specified by Coffeen in the Control Measures Record as this record is incorporated into the permit by reference. In addition, the revised language recognizes that certain control measures, e.g., natural moisture content and enclosure, are not actively "operated" by Coffeen. Rather, these measures are more appropriately described as being implemented.

Coffeen certainly will and must use its judgment when preparing the Control Measures Record. However, this does not mean that the provisions in the permit that require Coffeen to implement the control measures specified in this record are unenforceable. In this

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<sup>111</sup> In the 2013 permit, these conditions provided that,

The Permittee shall operate and maintain each affected operation with the control measures identified in the record required by Condition 7.[2, 3 or 4].9(b)."

In the revised permit that has now been issued, these conditions provide that,

The control measures implemented and maintained shall be identified and operated in conformance with the "Control Measures Record" required by Condition 7.[2, 3 or 4].9(b)(i) to satisfy Condition 7.[2, 3 or 4](a)(i), which record is incorporated by reference into this permit by Condition 5.2.7.

regard, the role of the Control Measures Record is to provide definition and certainty as to the measures that Coffeen implements for the subject operation. This record also enables a review of those measures by the Illinois EPA or USEPA separate from empirical observations of the levels of opacity or emissions from these operations.<sup>112</sup>

c. Comment:

In the 2013 Responsiveness Summary, the Illinois EPA also points out that "more frequent observations for visible emissions would not provide useful information." 2013 Responsiveness Summary at 29. It is difficult to comprehend why this is the case when Condition 7.2.8(b) already requires that,

...[a]s part of the inspections of Condition 7.2.8(a), the Permittee shall perform observations of the affected operation(s) for visible emissions in accordance with 35 IAC 212.107 to demonstrate compliance with the requirements of Condition 7.2.4(b), unless the Permittee elects to perform Reference Method 9 observations in accordance with Condition 7.2.7(a).

Draft Permit at Condition 7.2.8(b); see also Conditions 7.3.8(b) and 7.4.8(b).

If observations are useful for confirming compliance with the permit requirements, it would seem to be that more frequent observations would be useful for confirming compliance more frequently. As the Illinois EPA pointed out:

[T]he absence of visible emissions is a criterion that will act to simplify the periodic inspections for certain equipment, such as the coal crushers which are located in a closed building. For such equipment, the absence of visible emissions will likely readily confirm proper implementation of control measures.

2013 Responsiveness Summary at 29.

Similarly, more frequent observations confirming the absence of visible emissions will more frequently confirm the proper implementation, operation and maintenance of control measures.

Response:

The material excerpted from the 2013 Responsiveness Summary by this comment was a response to a 2013 comment that recommended that inspections of material handling operations be conducted on a daily basis and that each of these inspections include observations for visible emissions. As such, the response

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<sup>112</sup> There are a number of rules that require that sources implement the provisions of certain plans that they themselves prepare. In the NSPS for Coal Preparation Plants, 40 CFR 60.254(c) requires that the owner or operator of a subject open storage piles "...must prepare and operate in accordance with a submitted fugitive dust emission control plan that is appropriate for the site conditions..." In Illinois, 35 IAC 212.302 and 212.309 require certain sources with fugitive emissions from material handling operations to prepare and implement Operating Programs that address the measures that will be used to reduce to those fugitive emissions

addressed both the frequency of inspections and whether each inspection should include observations for visible emissions. The quoted material was not addressing the appropriate frequency for the required inspections of the subject operations. With regard to formal observations for visible emissions, the response posits that requiring such observations more frequently, by requiring them with each required inspection, would not have particular value since the applicable rules do not prohibit visible emissions from these operations. As such, it is more appropriate for the regular inspections required for these operations to directly address the implementation of control measures. At the same time, however, there may be particular operations for which the absence of visible emissions may be a simple way for the source to confirm the implementation of control measures.

Moreover, this comment presents the quoted material from the 2013 Responsiveness Summary out of context. Relevant paragraphs from the Responsiveness Summary are provided below in their entirety, including associated footnotes. As is more apparent when the quoted material is considered in context, the aspect of the 2013 comment that was being addressed was whether the permit should require a formal observation for visible emissions as part of each regular inspection that is required for the material handling operations.<sup>113</sup>

It should be noted that the use of control measures is required independent of the informal verifications (or observations) of the subject equipment that are contemplated by the permit. Lapses in the use of such measures must be corrected by Ameren independent of the formal inspections that are required. Because the collective requirements relating to control measures should be adequate to verify implementation of the control measures, the imposition of a daily, formal observation is not necessary to provide periodic monitoring that satisfies Title V's requirements. For these reasons, the comment does not justify changes to the frequencies of the formal inspections specified by the permit.<sup>Footnote 71</sup>

Moreover, more frequent observations for visible emissions would not provide useful information. Neither the applicable standards nor the permit prohibit visible emissions from the subject equipment. For purposes of periodic monitoring, the absence of visible emissions is a criterion that will act to

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<sup>113</sup> This comment also does not consider Condition 7.2.8(b) in its entirety. This condition addresses the periodic observations of the subject material handling operations that are needed to directly confirm compliance with the applicable opacity standard at 35 IAC 212.123. For this purpose, the permit requires that the source conduct observations for each operation on an annual basis. These observations are to be made in conjunction with the required regular inspections of the operation. If visible emissions, as determined in accordance with 35 IAC 212.107, are not observed during the inspection or if visible emissions are observed but correction action is taken to return the status of the operation to no visible emissions, actual observations for opacity by Reference Method 9 are not required. This recognizes that it would be unreasonable to require opacity observations to be conducted in such circumstances if actions had been promptly been taken to eliminate visible emissions. Otherwise, opacity observations must be conducted by a certified observer, in accordance with USEPA Method 9, within one week.

simplify the periodic inspections for certain equipment, such as the coal crushers, which are located in a closed building.<sup>Footnote 72</sup> For such equipment, the absence of visible emissions will likely readily confirm proper implementation of control measures. If visible emissions are not present from such equipment, either during an initial observation for visible emissions or following timely repair, it would also be unproductive to require observations for the opacity of emissions by USEPA Method 9, as are necessary for equipment from which visible emissions are normally present.

{Footnote 71} <sup>71</sup> Formal inspections of the coal handling equipment and coal processing equipment are required monthly pursuant to Conditions 7.2.8(a) and 7.3.8(a), respectively. Inspections of fly ash equipment are required weekly pursuant to Condition 7.4.8(a).

[Footnote 72] <sup>72</sup> It is also expected that visible emissions will normally not be present for a number of other pieces of equipment. The transfer point from the railcar loading pit to the coal transfer conveyor is located underground. Fly ash is transferred from the boilers with pneumatic conveying systems that operate under negative pressure.  
2013 Responsiveness Summary, p. 29 - 30.

As a final point, more frequent inspections of the material handling operations would obviously provide additional confirmation that the subject operations are being properly operated and specified control measures are being implemented. However, this is not a sufficient basis for mandating more frequent inspections as part of the Periodic Monitoring for the subject operations. As already discussed, the permit requires appropriate Periodic Monitoring for the subject operations.

5. **Permit Conditions:** 7.2.9(b) (i) (D), 7.3.9(b) (i) (D) and 7.4.9(b) (i) (D)

**Comment:**

The Control Measures Record includes primary control measures and, for certain emission sources, secondary control measures. However, the Control Measures Record is set up such that the source "may" operate the secondary control measures when there is "greater than normal dusting." The permit's use of the term "may" in this context suggests that the secondary control measures are optional even when the primary control measures are ineffective. To ensure that the control measures provide the necessary level of emission control needed to maintain compliance with applicable requirements, the Control Measures Record should be revised so that the secondary control measures must be used to supplement primary control measures whenever the primary control measures are ineffective at minimizing emissions, as required by 40 CFR 70.6(a). This revision to the Control Measures Record is necessary because our review of the permit record indicates that compliance with the applicable PM and opacity limitations may not be possible at times unless the secondary control measures are employed.

**Response:**

In response to this comment, the Illinois EPA has worked with IPGC to develop a revised Control Measures Record that does not include the phrase "greater than normal dusting" and the word "may."<sup>114</sup> These changes were facilitated by a comment by USEPA on the Control Measures Record for another coal power plant, in which it suggested that the phrase "greater than normal dusting" be replaced by language that would require use of secondary control whenever the primary measures are unable to prevent visible emissions that violate the applicable opacity standard.

In the revised Control Measures Record that is incorporated into the issued permit, secondary control measures will be used when the coal being handled is dryer than normal, such that the use of secondary control measures is needed to comply with applicable standards. Water atomized foggers, which were identified as primary control measures for certain coal handling operations but not used when the coal was "overly wet," are also now identified as secondary control measures. This more appropriately addresses these water foggers as they would only be used in certain circumstances. Lastly, water sprays, water mist curtains and water foggers are all also identified as secondary control measures as they would only be used in certain circumstances, i.e., when the temperature is above freezing and the coal is dry so that use of secondary control measures is needed.<sup>115</sup> These changes provide greater clarity as to the circumstances in which secondary control measures would be used

It is also unclear how 40 CFR 70.6(a) acts to dictate that Coffeen must use either primary or secondary control measures for its material handling operations to minimize emissions, as claimed by this comment. 40 CFR 70.6(a) addresses a variety of standard provisions that must be included in a Title V permit, including requirements for Periodic Monitoring. However, Periodic Monitoring does not dictate that sources must minimize emissions of units below the levels that are needed for compliance.<sup>116</sup>

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<sup>114</sup> The initial Control Measures Record, which would have been incorporated by the draft permit, provided that for train unloading, a Unloader Water Mist Curtain would be a secondary control measures, indicating that "Unloader Water Mist Curtain may be used to supplement primary control when coal being unloaded is unusually dry and causes greater than normal dusting."

<sup>115</sup> The initial Control Measures Record, which would have been incorporated by the draft permit, provided that "water sprayers, water curtains and foggers may not be operated at ambient temperatures approaching or below freezing, when their operation could pose a safety risk or cause equipment damage." Upon further consideration, it was recognized that the specific concern for these control measures that was being addressed was freezing of water on surfaces and in piping and spray equipment. This would inherently occur only during freezing or cold weather, which is when the received coal would retain its natural surface moisture. Accordingly, water sprayers, water curtains and foggers only need to be addressed as secondary control measures, which would potentially be used during warmer weather when the coal handled by the plant may be dryer than normal.

<sup>116</sup> With respect to Periodic Monitoring, 40 CFR 70.6(a) (3) (B), provides that

Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as

**6. Permit Condition: 7.2.9(h)**

**Comment:**

In Condition 7.2.9(h), calculations of actual PM emissions from the affected processes should be based on the emission factors and control measures documented in the demonstration described in Condition 7.2.9(b) (ii), as well as records of actual amounts of coal handled, as reflected in the records required by Condition 7.2.9(c). Please reword this condition as follows: "... based on the records required by Conditions 7.2.9(b) (ii) and 7.2.9(c)."

**Response:**

**The additional cross reference has been added as requested.**

**7. Permit Condition: 7.3.7(b) (v)  
Related Condition: 8.6.3**

**Comment:**

Condition 7.3.7(b) (v), which governs reports for testing of the PM emissions from the coal processing operations, does not include several requirements for these reports that were contained in the 2013 Permit. The Draft Permit would no longer require IPGC to submit information on the sampling points, the sampling train, detailed data and calculations, records of laboratory analyses, sample calculations, data on equipment calibration, and representative opacity data measured during testing. Although Condition 7.3.7(b) (v) references Condition 8.6.3 of the Draft Permit for reporting requirements, Condition 8.6.3 also does not require any of this eliminated information. Note that Condition 8.6.3(f) of the draft permit requires "[t]he results of the tests including raw data, *and/or* analyses including sample calculations" (emphasis added). Thus, under Conditions 7.3.7(b) (v) and 8.6.3 of the Draft Permit, unlike Condition 7.3.7(b) (v) of the 2013 Permit, IPGC only needs to provide raw data *or* analyses including sample calculations, not both. The requirements of Condition 7.3.7(b) (v) in the 2013 permit should be retained.

**Response:**

**It was appropriate for this condition, which addresses the content of reports for PM stack testing conducted on any stacks or vents of the coal processing operations, be revised as planned.<sup>117, 118</sup> A**

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monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit...

<sup>117</sup> This comment incorrectly indicated that Condition 7.3.7(b) (v) addresses reporting for observations of opacity, not for testing for PM emissions. In fact, requirements for opacity observations for coal processing operations are addressed in Condition 7.3.7(a) and have not changed. Nevertheless, the Illinois EPA has responded to this comment as it generally indicated that there were flaws in the planned changes to Condition 7.3.7(b) (v).

<sup>118</sup> With respect to opacity observations for the coal processing operations, this comment also stated the following (emphasis added):

It is important for IPGC to submit more, rather than less, information for its opacity observations. Providing more detailed information allows the Illinois EPA to verify that these observations are being properly conducted and PM pollution is being kept to a minimum. If IPGC is not required to allow the Illinois EPA and the public

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comparison of the required contents of reports for this testing pursuant to Condition 7.3.7(b) (v) in the 2013 permit and the draft permit shows that relevant information would still appropriately be required in these test reports. In this regard, Condition 7.3.7(b) (v) in the 2013 permit provided that these reports must include the information specified in Condition 8.6.3 and certain information specifically identified in Condition 7.3.7(b) (v) (A) through (E). However, this information specifically identified in Condition 7.3.7(b) (v) (A) through (E) duplicated information required by Condition 8.6.3 or was not needed for these reports. This has been corrected in the issued permit.

In particular, information on the sampling points and the sampling train is required to be included in test reports by Condition 8.6.3(e) as it requires that test reports include information on the test and analytical methodology used. Laboratory analyses are addressed as information on analytical methodology is required. Information on equipment calibration is required as equipment calibration is an aspect of the applicable methodology. Condition 8.6.3(f) requires test reports to include detailed data and sample calculations for testing. Opacity during PM testing is not required to be measured by Condition 7.3.7(b) so a requirement for reporting of such data during PM testing is not appropriate.<sup>119</sup>

In the issued permit, Condition 8.6.3(f) has been reworded so that it cannot be interpreted to require either raw data or sample calculations, but not both, in the manner suggested by this comment. Both raw data and sample calculations are now required for the various tests and analyses that are entailed in the testing of the emissions of particular emission units.<sup>120</sup>

8. Permit Condition: 7.3.8(a)

Comment):

Condition 7.3.8(a): Third sentence includes incorrect reference to "... records required by Condition 7.3.9(c) .... " Correct reference should be to Condition 7.3.9(d).

Response:

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and opportunity to closely examine this information, there may be an error in observation processes or results that may go unnoticed, potentially resulting in preventable pollution.

In fact, the information that must be included in reports for opacity observations is fully addressed by Condition 7.3.7(a) (v). Among other things, this condition requires that such reports include; 1) A description of observation conditions, including recent weather; 2) A description of the operating conditions of the subject processes; 3) Raw data; 4) The determinations of opacity; and 5) Conclusions.

Moreover, as already discussed, it is appropriate to consider the opacity observations that are required to be a form of performance testing, whose role is to authoritatively confirm compliance. It is not realistic to anticipate that these observations would reveal exceedances of the opacity standard.

<sup>119</sup> If representative opacity data during emission testing were determined to be needed, the Illinois EPA would require the source to conduct such opacity observations, as is provided for by Condition 7.3.7(a) (i) (C). The report for those opacity observations would be addressed by Condition 7.3.7(a) (v).

<sup>120</sup> In the issued permit, Condition 8.6.3(f) requires that emission test reports include "The results of the tests and/or analyses, with raw data and sample calculations.



This cross reference has been corrected as requested.

9. Permit Condition: 7.3.9(h)

**Comment:**

In Condition 7.3.9(h), calculations of actual PM emissions from the affected process should be based on the emission factors and control measures documented in the demonstration described in Condition 7.3.9(b)(ii), as well as records of actual amounts of coal processed, as reflected in the records required by Condition 7.3.9(c). Please reword this condition as follows: "... based on the records required by Conditions 7.3.9(b)(ii) and 7.3.9(c)."

**Response:**

The additional cross-reference to Condition 7.3.9(c) has been added as requested by this comment.

10. Permit Condition(s): 7.4.7(b)

**Comment:**

The Illinois EPA would eliminate Condition 7.3.7(b)(v) from the 2013 Permit. This governed PM emissions testing of the fly ash handling operations. The Statement of Basis explains that,

...these operations do not actually have stacks or vents that would be amenable to emissions testing. As such, it is impractical and [sic] to directly measure emissions of these operations by testing and it is unreasonable to indicate that such testing could be required.  
Statement of Basis at 43.

Please further explain why such testing is impractical and unreasonable?

**Response:**

PM emission testing is not practical for the subject operations because the exhaust gas flow rate cannot be properly measured by USEPA Reference Methods. As provided by Method 5, the test method that might be used to measure the concentration of PM in the exhaust from these units, emission testing of these units would also require measurements of the exhaust gas flow rate.

... to obtain reliable results, persons using this method should have a thorough knowledge of at least the following additional test methods: Method 1, Method 2, Method 3.(sic)

Method 1 addresses the measurement of gas flow rate in a duct or stack, which is an essential part of PM emission testing.<sup>121</sup> Such measurements

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<sup>121</sup> Method 1 is not applicable for ducts or stacks in which the gas flow is swirling or "cyclonic" or ducts or stacks smaller than 12 inches in diameter or 113 inch<sup>2</sup>) in cross-sectional area. It is accompanied by three alternative procedures: 1) Simplified procedures for no cyclonic or swirling flow; 2) Procedures for units whose ductwork does not provide for an acceptable sampling point (required distance from upstream and downstream flow disturbances); and 3) Procedures for small ducts. The first alternative is limited to ducts larger than 24 inches. The second alternative is not available for ducts with cyclonic flow. As the subject

are not Given that these ducts cannot meet the requirements for these methods, any requirement to test using Method 5 would be impractical because the measurement for exhaust gas flow rate would not be reliable.

11. Permit Condition: 7.4.8(a)

Comment:

Condition 7.4.8(a) of the 2013 Permit required inspections of the affected processes in fly ash handling to be conducted on a weekly basis. The Draft Permit only requires IPGC to inspect loadout operations on a weekly basis; all other processes need only be inspected on a monthly basis. The Illinois EPA should continue to require IPGC to conduct weekly inspection of these processes to avoid process emission units that handle fly ash from malfunctioning for several weeks. The issued permit should, therefore, retain the weekly fly ash handling inspection requirement of the 2013 Permit.

Response:

As discussed, it is appropriate that the formal inspections of the operations at Coffeen that handle fly ash within the plant be conducted on a monthly basis. Opacity observations have been conducted for the various fly ash handling operations that support changing the frequency of required inspections for these operations to monthly. Formal inspections on a weekly basis are only warranted for the fly ash load out operation. It poses concerns for proper function that are not present for the other operation. It was also the only fly ash handling operation from which any opacity was observed. While the measured opacity was small, maximum 3.33 percent, the presence of measureable opacity also supports keeping the formal inspections for fly ash load out on a weekly basis.

12. Permit Condition: 7.4.10(a) (ii)  
Related Condition: 7.4.9(b) (i)

Comment:

There are several problems with Draft Condition 7.4.10(a) (ii). This condition would require IPGC to notify the Illinois EPA of incidents in which it continued to operate process emission units that handle fly ash for more than 12 operating hours "after discovering that emission control measures required by the record identified in Condition 7.4.9(b) (i) were not present or operating." However, Draft Condition 7.4.9(b) (i) would not delineate what specific emission control measures are actually required. Rather, it requires IPGC to record a description of the "primary" and "secondary" control measures. Condition 7.4.9(b) (i) (B)-(C) of the Draft Permit. This is concerning because under Condition 7.4.10(a) (ii), the source is only required to report the absence or malfunction of specified control measures. If no control measures are specified in Condition

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units and their associated ductwork cannot meet these requirements, only the third alternative procedures for small ducts are potentially available.

While these alternative procedures are applicable for stacks or ducts greater than 4 inches in diameter or 12.57 inch<sup>2</sup>) in cross-sectional area, they are not applicable when the flow is cyclonic. Thus, even though some of the ducts would possibly meet the size criteria, these procedures are not applicable because of cyclonic flow induced by the upstream/downstream bends in the ductwork and the effect of the sampling probe itself.

7.4.9(b)(i), then the source is relieved of the reporting requirement in Condition 7.4.10(a)(ii).

Draft Condition 7.4.10(a)(ii) is also problematic because, in contrast to this Condition in the 2013 Permit, it only requires reporting when control measures are not present or operating, rather than when control measures are not in compliance with applicable requirements. Limiting the source's responsibility to report instances of noncompliance reduces the volume of information the Illinois EPA receives regarding violations of the Plant's operating conditions. Obviously, noncompliance is not a matter that should be treated lightly or go unreported.

Finally, Draft Condition 7.4.10(a)(ii) would extend the amount of time that would trigger reporting. Whereas the 2013 Permit only required reporting after four operating hours, the Draft Permit would require reporting after 12 operating hours. This increase in time also lessens the Illinois EPA's (and the public's) understanding of compliance problems at the plant. The issued permit should retain the four-hour reporting trigger contained in Condition 7.4.10(a)(ii) of the 2013 Permit.

**Response:**

The change made to this condition is appropriate. As discussed elsewhere, the nature of the material handling operations at Coffeen for which the CAAPP permit requires "use of control measures" is such that the specific measures that the source implements need not be defined in the permit. These measures may be appropriately defined in the "Control Measure Record(s)" that the source must maintain.

The source will need to implement control measures for fly ash. Fly ash is a fine, dry material. It is not reasonable to expect that fly ash handling operations could comply with applicable emission standards without implementing any control measures. The situation put forth by the comment, that the source would not implement any control measures for fly ash handling operations, is wholly hypothetical.

For the fly ash handling operations, pursuant to Condition 7.4.10(a)(iii), the source must generally report deviations from applicable requirements, including deviations from emission standards, in a quarterly report. The condition addressed by this comment, Condition 7.4.10(a)(ii), addresses incident-specific reporting that is required for certain deviations involving control measures. In this regard, Condition 7.4.10(a)(ii) refers to deviations from the requirement for implementation of control measures, Condition 7.4.6(a). As drafted, Condition 7.4.10(a)(ii) would require this incident-specific reporting for deviations in the use of control measures that are longer than 12 hours. The applicable emission standards that apply to the fly ash handling operations are addressed in Condition 7.4.4. Reporting of deviations from these standards, as well as for deviations involving control measures for which incident-specific reporting is not required, is addressed in Condition 7.4.10(a)(iii).

Accordingly, the relevant issue posed by the change to Condition 7.4.10(a) (ii) is whether it is reasonable to change the period of time before a deviation involving control measures must be individually addressed in an incident-specific report rather than reported in a quarterly report. The Illinois EPA has concluded that it is not unreasonable to increase this time period as requested by IPG. Incident-specific notification for deviations that continue for more than 12 hours, rather than only for 4 hours, will still require such notifications for deviations that are most worthy of individual attention by the Illinois EPA. Deviations that continue from one day to the next will still be required to be individually reported. At the same time, the information that the source must report for deviations involving implementation of control measures will not be meaningfully affected. The source must still address all such deviations in a quarterly report.

13. Permit Condition: 7.5.6(b) (vi)

**Comment(s):**

The condition added after Condition 7.5.6(b) (vi) was incorrectly numbered as Condition 7.5.6(b) (v). It should be Condition 7.5.6(b) (vii).

**Response:**

The numbering of these conditions has been corrected.

14. Permit Condition(s): 7.5.9(b) (ii)

**Comment:**

In Condition 7.5.9(b) (ii), the first sentence contains an incorrect reference to "Conditions 7.5.4(b) and (v)". The correct reference should be to Condition 7.5.4(c).

**Response:**

The cross references have been corrected.

15. Permit Condition(s): 7.5.9(h) (iii)

**Comment:**

Condition 7.5.9(h) (iii) cites Construction Permit 06090019 as authority, but the relevant condition in this construction permit [Condition 6(c) (ii)] is worded differently. To maintain consistency with the underlying applicable requirement, the condition should be state:

The Permittee shall maintain records documenting the design outlet loading of the bin vent filters, or representative emission test data for similar filter devices, in gr/scf, as provided by the equipment supplier.

**Response:**

In the issued permit, Condition 7.5.9(h) (iii) reflects the language recommended by this comment. This maintains consistency between the relevant substantive requirements from this construction permit and the recordkeeping required by the CAAPP permit to address compliance with this requirement.

**VIII. Responses Regarding Conditions in Section 7.6 of the Permit  
(Auxiliary Boiler)**

1. Permit Condition: 7.6.9(b) (i) (E)

**Comment:**

Condition 7.6.9(b) (i) (E) incorrectly refers to Conditions 7.6.10(a) and (c). The correct reference should be to Condition 7.6.10-2.

**Response:**

**This cross-reference has been corrected.**

2. Permit Condition: 7.6.9(c) (ii) (C)

**Comment:**

Condition 7.6.9(c) (ii) (C) is numbered incorrectly. It should be Condition 7.6.9(c) (ii) (B).

**Response:**

**The numbering of this condition has been corrected.**

3. Permit Condition: 7.6.10-1(a) (ii)

**Comment:**

Condition 7.6.10-1(a) (ii) incorrectly refers to "... quarterly reports required by Condition 7.6.10-2(d)...." The correct reference should be to Condition 7.6.10-2(a).

**Response:**

**This cross-reference has been corrected.**

4. Permit Condition: 7.6.10-2(b) (iii) (A) (VII)

**Comment:**

Condition 7.6.10-2(b) (iii) (A) (VII) incorrectly refers to Conditions 7.6.9(i) (ii) (A), (B), and (D) (I). The correct reference should be to Conditions 7.6.9(d) (ii) (A), (B) and (D) (I).

**Response:**

**These cross-references have been corrected.**

5. Permit Condition(s): 7.6.11(a)

**Comment:**

Condition 7.6.11(a) incorrectly refers to "... opacity standard of Condition 7.6.4(a) (iii) ... " It should state: "Compliance with the opacity standards of Conditions 7.6.4(a) (i) (A) and (a) (ii) ... "

**Response:**

**These cross-references have been appropriately corrected. The whole of Condition 7.6.4(a) includes requirements for opacity and thus it is not necessary to separately refer to each of the individual condition as requested by the comment.**

6. Permit Condition: 7.6.11(d)

**Comment:**

Condition 7.6.11(d) incorrectly refers to "... emission limit of Condition 7.5.4(d) ..." in first line. Correct reference should be Condition 7.6.4(d). Also, last line contains incorrect reference to Condition 7.6.6(a) (ii). The correct reference should be to Condition 7.6.8(b).

**Response:**

The cross-reference in the first line of Condition 7.6.11(d) has been corrected to refer to Condition 7.6.4(d). The cross-reference in the last line has been corrected to refer to Condition 7.6.8(b) and, to maintain meaning, the words "work practices" replaced with "monitoring."

**IX. Responses Regarding Conditions in Section 7.7 of the Permit  
(WFGD Emergency Diesel Generator)**

1. Permit Condition: 7.7.7

**Comment:**

In Condition 7.7.7, consistent with other revisions and for clarity, delete "at a minimum."

**Response:**

This change has been as requested.

2. Permit Condition: 7.7.8(a) (v) (A) (II)

**Comment:**

The fourth line of Condition 7.7.8(a) (v) (A) (II) contains an incorrect reference to "...requirements in Condition 7.7.6(b)." The correct reference should be to Condition 7.7.4(b).

**Response:**

This cross reference has been corrected.

3. Permit Condition: 7.7.8(c) (ii) (C)

**Comment:**

The last line of Condition 7.7.8(c) (ii) (C) contains an incorrect reference to "...follow-up reports submitted pursuant to Condition 7.7.9(b) (ii)." The correct reference should be Condition 7.7.9(b) (i) (B).

**Response:**

This cross reference has been corrected).

4. Permit Condition: 7.7.9(a) (ii) (A)

**Comment:**

Condition 7.7.9(a) (ii) (A) contains an incorrect reference to reporting that "...is required by Condition 7.7.9(a) (ii) or ...." The correct reference should be to Condition 7.7.9(a) (iii).

**Response:**

This cross reference has been corrected.

5.     **Permit Condition:**             7.7.9(a) (iii)

**Comment:**

Condition 7.7.9(a) (iii) contains an incorrect reference to Condition 7.7.6(b). The correct reference should be to Condition 7.7.4(b).

**Response:**

**This cross reference has been corrected.**

6.     **Permit Condition:**             7.7.9(b) (i) (B)

**Comment:**

The last line of Condition 7.7.9(b) (i) (B) contains an incorrect reference to Condition 7.7.8(e). The correct reference should be to Condition 7.7.8(c) (ii).

**Response:**

**This cross reference has been corrected.**

**X. Responses Regarding Conditions in Section 7.8 of the Permit  
(Gasoline Storage Tank)**

1.     **Permit Condition(s):**             7.8.8(b)

**Comment:**

In Condition 7.8.8(b), consistent with other revisions and for clarity, delete "at a minimum."

**Response:**

**The requested change has been made.**

**F. GENERAL COMMENTS WITH RESPONSES BY THE ILLINOIS EPA**

**1. Comment:**

The Draft Permit's reporting and operational requirements during periods of startup, shutdown, and malfunction ("SSM") of the plant are unlawful, were unlawful when first proposed, and are now actively being replaced across the country. The Illinois EPA is apparently relying on SSM provisions in Illinois' State Implementation Plan ("SIP"). However, SSM exemptions from emission limits as a category run contrary to the Clean Air Act, as determined by recent federal decisions on the topic and as manifested by USEPA's recent SSM SIP call, because they undermine the protection of the national ambient air quality standards ("NAAQS") and other fundamental requirements of the Clean Air Act. See *USEPA, State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction*, (May 25, 2015). The current Illinois SSM SIP has been explicitly invalidated, and the state is obligated to propose a replacement SSM SIP by November of this year.

Accordingly, the current SIP cannot serve as a legitimate basis for the terms in this Draft Permit. We therefore urge the Illinois EPA to rescind its explicit allowances for exceedances of emission limits during SSM periods; in the alternative to establish "sunset" provisions in this permit automatically eliminating all SSM permit terms as soon as the SIP provisions upon which they are based are replaced; or at the very least to commit to an immediate and automatic reopener process when the SSM SIP provisions are replaced.

Furthermore, the Draft Permit contains several provisions concerning SSM that are, as the Illinois EPA itself admits, "ambiguous and ... lack[ing] regulatory meaning." Statement of Basis at 43. These vague provisions could allow Coffeen to effectively thwart important protections that prevent abuse of the existing SSM provisions.

Any exemptions to emission limitations, for whatever reason, are contrary to the CAA and to USEPA's longstanding policy that emission limitations must apply and be enforceable at all times. The CAA specifies that SIPs must include enforceable "emissions limitations," and further requires that these "emissions limitations" apply on a "continuous" basis. Sections 110(a)(2)(A), (a)(2)(C) and 302(k) of the CAA. Exceptions allowing facilities to emit additional pollutants during SSM events by their operation prevent the "continuous" enforcement of emission limits. Thus, they conflict with the plain language requirement of the CAA. Any exemptions also rob USEPA and the public of their enforcement power in violation of the enforcement provisions in Sections 113 and 304 of the CAA.

Exempting emissions also conflicts with the core purpose of the CAA. USEPA recognizes its "overarching duty under the [CAA] to protect public health through effective implementation of the NAAQS." USEPA Memorandum to Docket EPA-HQ-OAR- 2012-0322, at 9. Startup, shutdown and malfunction events result in short-term releases of a large amount of pollution, including releases of SO<sub>2</sub> and NO<sub>x</sub>, as well as



other toxic and carcinogenic pollutants, in amounts that are many times above the legal limits. See Env'tl. Integrity Project, *Gaming the System: How Off-the-Books Industrial Upset Emissions Cheat the Public Out of Clean Air*, at 5-8 (Aug. 2004). Though there is a paucity of data on excessive emissions events, a 2004 study by the Environmental Integrity Project shows that excess pollution released during SSM events can actually exceed the "normal" annual amount of pollution that facilities report otherwise.

In short, continuous and enforceable emission limits are the only way to ensure protection of ambient air quality standards. As USEPA noted in its new SSM rule, "SIPs are ambient-based standards and any emissions above the allowable may cause or contribute to violations of the national ambient air quality standards." USEPA Memorandum to Docket EPA-HQ-OAR-2012-0322, at 9 (citing 1982 SSM Guidance). Continuous and enforceable limits also ensure that pollution sources continue to have a strong incentive to operate using best practices and to invest in appropriate pollution controls and equipment.

The D.C. Circuit has held that any affirmative defenses whatsoever against enforcement of emission limitations are inconsistent with the Act. *Nat. Res. Def. Council v. E.P.A.*, 749 F.3d 1055, 1063 (D.C. Cir. 2014). In April of 2014 in *Nat. Res. Def. Council*, the D.C. Circuit struck down the affirmative defense provisions in regulations allowing cement plants to avoid monetary liability for violations of emission standards during unavoidable malfunctions. *Id.* at 1064. In so holding, that court noted that the Act's citizen suit and civil penalty provisions, sections 304 and 113, make the question of what civil penalties, if any, are appropriate in a citizen suit enforcement action a question for district courts to decide, not USEPA. *Id.* at 1063. The court thus found that USEPA had no authority to create the affirmative defense. *Id.* at 1064. In response to this ruling, USEPA also has made clear the unlawfulness of allowing unenforced, unrestricted emissions during SSM in its new SSM rule. In that rule, USEPA states that emission limits apply at all times, including SSM, and no affirmative defenses to enforcement may be employed. USEPA, *State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction*, (May 25, 2015).

**Response:**

**As already discussed, the USEPA's SIP Call for SSM does not support the changes to the CAAPP permit for Coffeen that this comment recommends. Provisions of approved SIPs are not invalidated or directly altered by the SIP call, as claimed by this comment. USEPA clearly recognized this in the preamble to the SIP call stating:**

**When the USEPA issues a final SIP call to a state, that action alone does not cause any automatic change in the legal status of the existing affected provision(s) in the SIP. During the time that the state takes to develop a SIP revision in response to the SIP call and the time that the EPA takes to evaluate and act upon the resulting SIP submission from the state pursuant to CAA**

section 110(k), the existing affected SIP provision(s) will remain in place.  
80 FR 33840 (June 12, 2015)

The SIP Call requires appropriate rulemaking by affected states and jurisdictions, not source-by-source actions during permitting.<sup>122</sup> For Illinois, until the Pollution Control Board completes such rulemaking<sup>123</sup> and this rulemaking is approved by USEPA as revision to Illinois' SIP, CAAPP permits must implement the provisions of the current SIP.<sup>124</sup>

It is also not appropriate for this CAAPP permit to include "sunset provisions" or otherwise address the transition between the current SIP and the revised SIP. This is because this transition and other actions that are appropriate in Illinois to respond to the SIP call will necessarily be an

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<sup>122</sup> As discussed in this comment, USEPA has reconsidered the provisions that address the potential for "excess emissions" during SSM in the SIPs of a number of states and local jurisdictions, including Illinois' SIP. USEPA has now found that many of these existing SIP provisions, including the relevant provisions of Illinois rules dealing with startup and malfunction and breakdown events, which USEPA had previously approved, are inconsistent with provisions of the CAA.

Parallel with its SIP Call related to SSM events and its work with affected states and other jurisdictions on revisions to their SIPs, USEPA is also committed to undertaking rulemaking to revise a number of federal emission standards that it adopted. These standards must also be revised so they appropriately address emissions during SSM.

<sup>123</sup> In Illinois, this rulemaking would involve a proceeding before the Pollution Control Board in which the Illinois EPA, potentially affected sources and interested members of the public could all participate.

<sup>124</sup> 35 IAC 201.149 prohibits startup (S) of an emission unit or continued operation of an emission unit during malfunction or breakdown (MB) if such operation would cause a violation of an applicable state emission standard absent express permit authorization for such violation. This rule does not address potential violations of SIP limitations during shutdown. Accordingly, changes to Illinois' SIP related to shutdown are not actually required by the SIP Call, only for startups and "malfunction and breakdown" events, more simply referred to as "malfunctions" by USEPA in the SIP call.

35 IAC 201 Subpart I sets forth a two-step process for addressing compliance with state emission standards during SMB. The first step consists of obtaining authorization by means of a permit application to make a future claim of SMB. The second step involves making a viable claim of SMB. For startup, this consists of showing that all reasonable efforts have been made to minimize emissions from the startup event, to minimize the duration of the event, and to minimize the frequency of such an event. For MB, this consists of showing that continued operation was necessary to prevent injury to persons or severe damage to equipment, or was required to provide essential services. Inherent in this showing is the obligation to show that operation and excess emissions occurred only to the extent necessary.

Ameren Energy Generating Company sought SMB authorizations for certain units at the Coffeen Station. The Illinois EPA reviewed these requests and, as appropriate, granted authorizations in the CAAPP permit for Coffeen to make claims of SMB. These authorizations do not equate to an "automatic exemption" from otherwise applicable state standards. These authorizations are fully consistent with long-standing practice in Illinois for permitting and enforcement. In particular, the nature of the coal utility boilers is such that certain excess emissions may occur during SMB that a source cannot reasonably avoid or readily anticipate. However, the source may be held appropriately accountable for excess emissions that should not have occurred regardless of the authorizations in a CAAPP permit related to SMB. In summary, the provisions in the CAAPP permit related to SMB do not translate into any advance determinations related to actual occurrences of excess emissions. Rather, they provide a framework whereby the source is provided with the ability to make a claim of SMB, with any such claim being subject to further review.

aspect of the rulemaking for the required revisions to Illinois SIP.<sup>125</sup>

This comment does not identify any deficiencies in the conditions of the permit that deal with SMB as compared to the relevant provisions of Illinois' current SIP that address SMB. The discussion in the Statement of Basis referred to by this comment, which addresses certain planned changes to the wording of various permit conditions, involves provisions related to control measures for material handling and processing operations.<sup>126</sup> The discussion does not address conditions of the permit that deal with SMB and the provisions for Illinois' current SIP for SMB.<sup>127</sup>

In addition, as already explained, the SIP call is not based on a quantitative evaluation by USEPA of the impacts on ambient air quality of extra emissions during SSM events. Rather, the SIP call is based on a reassessment of the language of the CAA by USEPA, as guided by various court decisions related to SSM events. Information has also not been provided to support the claim that the emissions of coal power plants associated with SSM events are significant. The study that has been cited to support this claim, *Gaming the System: How Off-the-Books Industrial Upset Emissions Cheat the Public Out of Clean Air*, does not address coal-fired power plants.<sup>128</sup>

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<sup>125</sup> The SIP Call does not simply mandate that current provisions for SSM in the subject SIPs be eliminated and that the current short-term emission standards in SIPs be made applicable at all times. Rather, the SIP Call requires that SIPs be revised so that they appropriately address SSM events. USEPA recognized that a number of different approaches may be possible and appropriate to address various types of emission units and their possible circumstances.

One possible approach recognized by the SIP Call is the adoption of "alternative emission limitations" or emission standards for SSM events. The adoption of such alternative limitations, as contemplated by the SIP Call, would be a task that would also be carried out through rulemaking. Accordingly, while it is correct that certain provisions of Illinois' SIP dealing with SMB events have now been found by USEPA to be inconsistent with the Clean Air Act, both the revisions to the current provisions and the transition to the new provisions must proceed through the rule of law.

<sup>126</sup> The discussion in the Statement of Basis referred to by this comment addresses Conditions 7.2.6(a)(i), 7.3.6(a)(i) and 7.4.6(a)(i). These conditions address the measures that are used for control of particulate matter emissions from coal handling operations, coal processing operations and fly ash handling operations.

<sup>127</sup> It should also be recognized that the challenge of permit conditions made by this comment does not fall within the scope of revisions made in this proceeding to resolve the appeal of the initial CAAPP permit. Effectively, this comment challenges the validity of certain conditions in the initial CAAPP permit that implemented Illinois rules for startups and malfunction/breakdown events. This proceeding is governed by the applicable requirements of Title V and Illinois' CAAPP program, which act to limit the scope of review to the revisions that would be made to the CAAPP permit.

<sup>128</sup> It is also noteworthy that applicable emission standards for boilers commonly address the rate of emissions of a pollutant relative to the heat input to the boiler, the concentration of a pollutant in the exhaust stream of the boiler or the steam or energy output from a boiler. These standards reflect regulatory determinations of emission rates that are achievable by various classes of boilers with appropriate design, operating practices and control devices. These emission standards only indirectly address the mass of emissions going to the atmosphere, in pounds/hour. The actual mass emission rate, in pounds/hour, at any time depends on the load or heat input to the boiler, as well as the relative emission rate, in pounds/million Btu heat input or ppm, at that time. If the load of a boiler is low during a period of time or an upset, the actual mass emission rate during may be lower than the typical mass emission rate even if the relative

2. **Comment:**

Please ensure that this plant's plans for exceedances and taking appropriate action on exceedances are greatly improved.

**Response:**

As already discussed, it is not appropriate for the permit to delineate specific action that should be taken by the source in response to exceedances, as broadly requested by this comment. As a general matter, except for certain exceedances that may occur during startups and certain "unavoidable" exceedances that result from malfunctions or breakdowns, there should not be exceedances. If exceedances do occur, the permit should not pre-determine the specific actions that the source should take in response. The actual actions that the source takes in response to particular exceedances should be available for case-by-case review by the Illinois EPA, USEPA or other entity in the context of possible enforcement.

3. **Comment:**

The current Draft Permit would be the final step in the more than 20 year process to issue a legally acceptable CAAPP permit for Coffeen.<sup>129</sup> There are serious deficiencies with the process that the Illinois EPA has undertaken to issue legally functional CAAPP permits for Coffeen and Illinois' other coal-fired power plants. This has left the public and the Illinois EPA without the essential emission measurement and transparency tools that Title V operating permits provide.

**Response:**

As observed by this comment, getting effective, up-to date CAAPP permits in place for Illinois' coal-fired power plants has been a challenge for the Illinois EPA and this effort is still not complete. This is a consequence of many factors, including the complexity of the regulatory requirements that apply to these plants, the interest in these plants by environmental advocacy organizations and resource constraints generally.

4. **Comment:**

On September 5, 2014, the Illinois EPA and USEPA Region 5 entered into a Work Plan<sup>130</sup> in part for the purpose of "significantly

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emission rate is higher than the typical rate. This also means that violations of emissions standards that are set for boilers based on considerations of emission control technology are not synonymous with elevated concentrations of pollutants in the atmosphere or violations ambient air quality standards.

<sup>129</sup> Ameren, the prior owner of Coffeen, first filed an application for a CAAPP permit for the plant in September 1995. While the Illinois EPA issued an initial CAAPP permit in September 2005, Ameren appealed that permit to the Board and it was stayed in its entirety. This stay was not lifted until September 2012 when the conditions of the initial permit that were not contested became effective. In September 2012, the Illinois EPA also began a public comment period for significant modifications to the initial permit to resolve the appeal of the other conditions of the permit. Comments were submitted that noted several deficiencies in the draft revised permit, including deficiencies related to the CAM plan and several other permit provisions. The Illinois EPA issued a revised CAAPP permit for Coffeen that was fully effective in October 2013.

<sup>130</sup> Illinois Program Work Plan for Calendar Years 2014-2016, Agreement Between Illinois Environmental Protection Agency and Region 5, U.S. Environmental Protection Agency

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reduc[ing] the Clean Air Act Permit Program permit backlog.” The Work Plan covers the years of 2014-2016 and contains commitments by the Illinois EPA related to the Title V permitting program. Even with the permitting burden reduced by the recent loss of two of Illinois’ coal-fired power plants by retirement and conversion to natural gas, the Illinois EPA is far from meeting the schedule that it committed to in the Work Plan.<sup>131</sup> The Illinois EPA’s abject failure to meet its commitment in the Work Plan continues to deprive the public of the protections offered by updated Title V permits containing all applicable requirements.

**Response:**

As observed by this comment, the schedule in this Work Plan for processing CAAPP permits for Illinois’ coal-fired power plants was not realistic. The Illinois EPA is now working with USEPA on a more realistic approach for processing these CAAPP permits. This approach narrowly focuses on the timing of the next steps that the Illinois EPA will take to process the permits for the particular plants that are currently being worked on.

**5. Comment:**

Over the years, emissions from the Coffeen plant have caused respiratory and other health consequences.

**Response:**

The health impacts of coal-fired electric power plants have been the subject of significant scientific scrutiny. These plants do emit pollutants that in sufficiently high concentrations can have health effects, particularly for people suffering from asthma, chronic respiratory diseases or heart disease. Scientific research continues to identify adverse health effects from air pollution. Some studies have found that emissions from coal power plants do contribute to these effects at levels that can be predicted mathematically. Such studies do not demonstrate that emissions from the Coffeen plant are emitted in such concentrations as to directly cause health effects to nearby residents. Moreover, these studies do not demonstrate that power plants like the Coffeen Station pose a significant risk to the health of specific individuals. Indeed, having an adequate, reliable and affordable supply of electricity is also essential to modern society, and to the health and well-being of the public. It is more reasonable to consider that the purpose of these studies has been to advance public policy in the direction of reducing the emissions and associated health impacts from existing power plants, some of which are over 50 years old.<sup>132</sup>

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(September 5 2014) (Work Plan). The Work Plan was signed by the Director of the Illinois EPA, Lisa Bonnett, and the USEPA Regional Administrator, Susan Hedman, at that time.

<sup>131</sup> When this Work Plan was signed, only the revised CAAPP permits resolving the appeals of the initial permits for the Coffeen and CWLP plants had been issued. In the Work Plan, the Illinois EPA agreed to complete the process of reopening and issuing revised CAAPP permits for these plants. The Illinois EPA also agreed that by the end of 2016 it would complete the process of resolving the appeals of the initial CAAPP permits and issuing reopened permits for the other 12 coal power plants then remaining in Illinois. However, the Illinois EPA has only issued CAAPP permits that resolve the appeals for four more plants and has not completed any reopening of the CAAPP permits for these plants.

<sup>132</sup> Recommendations from these studies include requests to legislatively impose more stringent emission limits on coal-fired power plant and for existing coal-fired power plants to be upgrade with more modern emission control technology.

6. **Comment:**

The signage at Coffeen Lake warning about consumption of fish has been removed. This signage needs to be appropriately replaced. Because of the biomagnification of mercury in the food chain, people who may eat fish caught from this lake, especially women who are or may become pregnant and children, should be aware that mercury contamination is a concern with certain species of fish.

**Response:**

The Illinois EPA agrees that it is important that people who fish in Illinois be made aware of the advisories that are issued by the State of Illinois about consumption of the fish that they catch due to the levels of mercury and other contaminants. In particular, consumption of fish with high mercury levels may pose a health risk, especially for sensitive populations, i.e., children younger than 15 years of age and women who are or may become pregnant, to protect the unborn and nursing infants. Specific advisories are given for particular bodies of water. Further information on the fish advisory for mercury, as well as for advisories for contaminants in fish other than mercury, is available from Department of Public Health.

7. **Comment:**

I am sensitive to contaminants in the air. Some days, the air is irritating and suffocating and can cause prolonged coughing and discomfort. Some think that Coffeen disperses especially offending emissions on Sunday evenings. However, I see daily particle dust collecting on my glass top table under a covered deck, so there are definitely emission problems every day.

**Response:**

It is not appropriate to attribute the quality of the ambient air in the area near the Coffeen plant to this plant in the manner implied by this comment. The air quality in the area reflects the contribution of many sources in addition to Coffeen, including manufacturing plants, cars, trucks and other vehicles, agricultural activities, roadways, open burning and natural sources. As the area around Coffeen is rural, only a fraction of the air quality in the areas is attributable to the emissions of sources that are actually located in the area. The remainder is attributable to the emissions of sources outside the area, including sources that may be hundreds of miles away.

Moreover, accumulations of dust on surfaces may not indicate that there are problems and the air is unhealthy. The concern for ambient air quality for particulate matter is very fine particles that do not readily settle out and remained suspended in the air. The dust particles that are described in this comment are likely coarse material that may be a nuisance but does not necessarily indicate poor air quality.

8. **Comment:**

While I do not live in the area, I am in Hillsboro and around Coffeen frequently and have close friends who live in the area, several of whom suffer from asthma. I would like the Illinois EPA to make this CAAPP permit as strong as possible because the air quality around Coffeen can be noticeably poor.

**Response:**

As discussed, it is not appropriate to attribute the quality of the ambient air in the area near the Coffeen station to this source in the manner implied by this comment.

With respect to asthma, asthma is a serious respiratory disease affecting a small but significant percentage of the population. Individuals who have asthma need to be under a doctor's care. While poor air quality may have a role in triggering asthmatic symptoms and attacks, its role in causing this disease is still being investigated. Poor air quality is also only one of many triggers for asthma symptoms. Periods with poor air quality are likely only a small part of, and if anything a complication to, symptoms caused by other factors such as exposure to allergens (pollen, molds, dander, etc.), exposure to tobacco smoke and irritating chemicals, cold air, physical exercise or even certain medications. To quantitatively link asthma symptoms to poor air quality and then to go further and link that poor air quality to this specific source is not warranted either technically or legally.

**9. Comment:**

I am very concerned that this planned permit would not require the Coffeen station to meet all of the current regulations. It is not fair to the people in the area that this power plant is allowed to continue functioning without meeting up-to-date, comprehensive Clean Air Act requirements. Old coal fired power plants like Coffeen should not continue to be allowed to operate at levels that create particulate matter pollution, SO<sub>2</sub> pollution and other pollutant levels that harm public health and the general well-being.

**Response:**

In fact, the Coffeen station is subject to and is required to meet all applicable emission standards and requirements that currently apply under the Clean Air Act. The SO<sub>2</sub> emissions of both coal boilers are now controlled by scrubbers. The NO<sub>x</sub> emissions are controlled by selective catalytic reduction systems. These systems must be effectively operated so that the coal power plants in Illinois now operated by IPH meet "fleetwide" multi-pollutant standards (MPS) adopted by the State of Illinois to lower the aggregate emissions of SO<sub>2</sub> and NO<sub>x</sub> from these plants. The emissions of particulate matter from the coal boilers at Coffeen are controlled by electrostatic precipitators that must be operated to meet the rigorous standards in the MATS rules recently adopted by USEPA. These requirements and other emission standards that apply to Coffeen exist as a matter of rule. As such, these requirements, and IPGC's obligation to comply with these requirements, exist wholly independently of whether they have been addressed in the CAAPP permit for the Coffeen station.

**10. Comment:**

The residents of Montgomery County deserve cleaner air. The rates of childhood poverty, overall poverty and childhood food insecurity in Montgomery County are higher than the statewide averages. The Illinois EPA's work to strengthen and improve the CAAPP permit for Coffeen is an Environmental Justice issue as well as being important for the overall air quality of Illinois.

**Response:**

Air quality in Montgomery County is generally good and improving due to the variety of new federal and state regulations that have gone into effect requiring reductions in emissions that impact air quality in Illinois, including Montgomery County. As already discussed, as is appropriate for a major coal-fired power plant, actions have been taken at the Coffeen station that have reduced its emissions and contributed to improvements in ambient air quality.

**11. Comment:**

Air quality is an issue that is important for the health of the public. Health costs from air pollution are a burden on the public, whether it is sick days from school and work, increased asthma attacks, or other wellness and well-being issues.

**Response:**

The health impacts of air pollution, along with its environmental impacts, are the principal reasons that regulations continue to be adopted that require reductions in emissions from existing sources to improve air quality. The continued adoption of such regulations is necessary because there are areas in Illinois and across the country that still do not meet health-based goals for ambient air quality, including the National Ambient Air Quality Standards (NAAQS) adopted by USEPA. For example, in R2015-021, the Illinois Pollution Control Board recently adopted rules for SO<sub>2</sub> emissions to bring the Pekin and Lemont areas into attainment for a new 1-hour ambient air quality standard for SO<sub>2</sub> adopted by USEPA. These rules, which were proposed to the Board by the Illinois EPA, include more stringent emission standards for the SO<sub>2</sub> emissions of the coal-fired power plants in these areas.

For individuals with respiratory disease, information on current air quality may be of importance to enable them to appropriately manage their daily activities. For this purpose, current data for ambient air quality across the country, including south central Illinois, is available from USEPA's AirNow internet site.<sup>133, 134</sup>

**12. Comment:**

The Illinois EPA should impose requirements in the CAAPP permit for the Coffeen Station that are more protective of the public health and the environment.

**Response:**

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<sup>133</sup> <https://www.airnow.gov/>.

<sup>134</sup> The Illinois EPA also routinely computes Air Quality Index data for the more populated areas in Illinois to provide the public with a simple assessment of the current air quality and the air quality that is forecast for the next day. This data is intended to enable people, especially individuals who are sensitive or very sensitive to air pollution, to appropriately adjust their daily activities. While this data is not prepared for the area between the MetroEast and Springfield areas, Air Quality Index data for the MetroEast area could be conservatively used to address current ambient air quality in the area around Coffeen.

For more information on the Air Quality Index program refer to Section 3 of one of the Annual Air Quality Reports issued by the Illinois EPA.

<http://www.epa.illinois.gov/topics/air-quality/air-quality-reports/index>.

Other information about current air quality is also available on the Illinois EPA webpage. <http://www.epa.illinois.gov/topics/air-quality/outdoor-air/index>.



The CAAPP permit for the Coffeen Station does not provide a venue in which to impose more stringent limits on the emissions of this existing source. The role of a CAAPP permit is compile the substantive limits and requirements that currently apply to a source accompanied by Periodic Monitoring as needed to confirm compliance with those requirements. More stringent emission limits, as requested by this comment, would need to be established through state rulemaking by the Board,<sup>135</sup> rulemaking by USEPA or other independent action. Moreover, it is unclear why such an action would now be appropriate for this plant given the rules that now apply, measures that are currently being used at the plant to control emissions and current air quality in the area around the plant.

13. Comment:

In the future, it would be a great help if the Illinois EPA could adopt its own more up-to-date format for CAAPP permits and provide a document that is more understandable and of shorter length for the general public. Other states likely have CAAPP permits that could be used as a model for a document that is more approachable by the public. A more readable document could possibly encourage public participation. I do respect that the Illinois EPA has hugely extensive work in these permitting processes and that this is a very technical process.

Response:

As observed by this comment, CAAPP permits for coal power plants are not simple documents. This is because these CAAPP permits must address a number of different requirements under applicable state and federal regulations that apply to the emissions of coal-fired boilers and other emission units at these plants. These requirements must be accurately addressed. As the underlying regulations are detailed and complicated, this necessarily leads to CAAPP permits that are detailed and complex. However, this is not inappropriate as the purpose of a CAAPP permit is to assemble the applicable requirements in a single document, supplemented with requirements for Periodic Monitoring as needed to verify compliance with those substantive requirements.

As the CAAPP permits for coal-fired power plants are highly technical, it follows that the statements of basis prepared by the Illinois EPA to address planned actions involving these CAAPP permits must also address subjects that are highly technical.

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<sup>135</sup> For the state new rules to also be able to be enforced by USEPA, the new rules would need to be submitted to USEPA for its formal approval as part of Illinois' State Implementation Plan (SIP) pursuant to Section 110 of the CAA.

## **ATTACHMENT 1:**

### **CHANGES BETWEEN THE DRAFT PERMIT AND THE ISSUED PERMIT**

#### **Section 4**

The table in Section 4 of the permit, which lists emission units at the Coffeen Station, was revised so that the existence of insignificant activities at this source, as addressed in Section 3 of the CAAPP permit, is also acknowledged. Accordingly, Section 4 of the permit is now simply entitled "Emission Units at This Source," rather than "Significant Emission Units at This Source." This change was made so that the listing of emission units at the source in Section 4 of the permit also recognizes the presence of insignificant activities at the source.

#### **Condition 5.2.2(a) (ii)**

A new condition has been included in the issued permit, Condition 5.2.2(a) (ii), to directly address compliance with 35 IAC 212.301. This rule prohibits fugitive emissions if they are visible at the property line when looking directly overhead unless the wind speed is more than 25 miles per hour. This new Condition 5.2.2(a) (ii) provides that, upon request by the Illinois EPA, the source must conduct daily observations at the property line for a week to address compliance with 35 IAC 212.301. This requirement addresses the unlikely circumstance that the emissions from the subject operation(s) would be such that compliance with 35 IAC 212.301 might be put into question. This change responded to concerns that the draft permit did not include compliance procedures to address 35 IAC 212.301.

#### **Condition 5.2.7(a) (ii) and (iii)**

A new condition has been included in the issued permit, Condition 5.2.7(a) (ii), to address revisions to the Control Measures Record for material handling operations that the CAAPP permit requires the source to maintain. The new condition provides that if the source submits a revised Control Measures Record to the Illinois EPA and the Illinois EPA notifies the source of any deficiency in the revised record within 30 days, the source must respond with relevant additional information or a further revision to the Control Measures Record within 30 days of the written notice of the deficiency. This condition is intended to facilitate timely action by the source if there are deficiencies in a revision to this record. This change was made to respond to a comment as it expressed concern that the draft permit would have allowed the source to make revisions to the Control Measures Record without adequate provisions for review by the Illinois EPA.

An exception in new Condition 5.2.7(a) (iii) to the broader "incorporation by reference" of the Control Measures Record is created for revisions to the Control Measures Record for 1) Train unloading; 2) Loading coal to the storage piles (No. 4 belt discharge); 3) Wind erosion from the storage piles; and 4) Dry ash load-out. These operations were identified on the basis of their potential for emissions, as they are the only operations addressed by the Control Measures Record whose emissions could, as a practical matter, exceed applicable standards. For such operations, changes to the Control Measures Record affecting the nature, application or frequency of the relevant control measures will not be automatically incorporated into the permit but, instead, will require an appropriate permit revision.

### **Sections 6.1 through 6.2**

In Sections 6.1 and 6.2 in the issued permit, which address requirements of the federal Acid Rain Program and Cross-State Air Pollution Rule (CSAPR) that apply to the coal boilers, changes have been made to be consistent with the language of the underlying rules. Most notably, the term "Permittee" has been replaced with the term "Owners and Operators" or "Owners or Operators." Other changes have also been made in Section 6.2 to be consistent with the wording of the CSAPR rule. In addition, provisions of the CSAPR rule that address the implications of this rule have been added to the issued permit. For example, new Condition 6.2.6 explains that the CSAPR rule does not affect the source's obligation to comply with other requirements that apply to the NO<sub>x</sub> and SO<sub>2</sub> emissions of the coal boilers. These changes responded to concerns that the language of these sections in the draft permit deviated from the language of the relevant rules in ways that might potentially be significant.

### **Conditions 6.4.2, 6.4.3(b) and (c), 6.4.4(b), and 6.4.6(b) -**

Various changes have been made to these conditions, which address requirements of 35 IAC Part 225 including the Multi-Pollutant Standard (MPS). Because the Illinois Pollution Control Board terminated the Variance issued to Illinois Power Holding for the MPS standard for SO<sub>2</sub> emissions on October 27, 2016, the issued permit does not address requirement of the Variance. Instead, the issued permit reflects applicable requirements of 35 IAC Part 225 for SO<sub>2</sub> emissions. The issued permit also identifies the monitoring and recordkeeping requirements for SO<sub>2</sub> and NO<sub>x</sub> emissions located elsewhere in the permit that serve to provide the information for Coffeen that is needed to confirm compliance with the MPS standards. The issued permit also includes requirements for reporting to explicitly address compliance with the MPS standards. These changes responded to concerns that these conditions did not appropriately or adequately address compliance with the MPS standards.

### **Conditions 7.1.5(a)**

In this condition, the phrase "coal or other solid fuel" has been replaced with "coal (solid fuel)." In this condition, which addresses the possible applicability of different state emission standards to the coal boilers if solid fuel were not their principle fuel, coal is appropriately identified as being a type of solid fuel. This is because the relevant state standards that address emissions from boilers that burn coal do not actually refer to boilers that burn coal. These standards actually refer and apply to boilers that burn "solid fuel." These changes respond to comments that the changes to this condition that would have been made by the draft permit would allow the boilers to burn solid fuels other than coal. The new wording in the condition in the issued permit is more consistent with the language of relevant state emission standards. It also better expresses that coal is being addressed in this condition as a type of solid fuel.

### **Condition 7.1.5(1)**

This non-applicability statement was added in the issued permit. It recognizes that the NO<sub>x</sub> emissions of the coal boilers are not subject to 35 IAC Part 217 Subpart M, Electrical Generating Units. This is because, as provided by 35 IAC 217.342(b), these boilers are subject to MPS Standard in 35 IAC Part 225. The need for this non-applicability statement was identified during work on the CAAPP permit for another coal-fired power plant in Illinois.

### **Draft Conditions 7.1.7(a) (i) and (iv)**

These draft conditions have not been carried over into the issued permit. These conditions addressed initial testing for emissions of PM and CO from the coal boilers pursuant to the CAAPP permit. This testing has now been conducted.

**Draft Condition 7.1.7(a) (ii) and Proposed Condition 7.1.7(b) (i)**

Changes have been made to these conditions that address the load at which the coal boilers are operated during the required periodic emission testing to confirm compliance with the state standards for PM emissions. Draft Condition 7.1.7(a) (ii) has not been carried over into the issued permit. This condition would have required further testing of a boiler based on the load at which the boiler is operated compared to the load when it was last tested.\* Condition 7.1.7(b) (i) now specifies that this periodic testing must be conducted at "maximum normal operating load conditions," using terminology in the MATS rule for PM emission testing, 40 CFR 63.1007(a) (2). This will serve to ensure that the required testing of the boilers is conducted at sufficiently high load that the results can be considered representative. Accordingly, Draft Condition 7.1.7(a) (ii) is no longer necessary. These changes respond to comments expressing concern that the criteria in Draft Condition 7.1.7(a) (ii) would have not required that this testing be conducted at sufficiently high load to ensure that the results would be representative.

\* Related changes were also made to Condition 7.1.10-2(a) (i) (B) as records are no longer needed for the operation of the boilers in relation to the criteria that were formerly contained in Condition 7.1.7(a) (ii).

**Conditions 7.1.7(e) (iii) (F) and 7.1.11(c)**

Condition 7.1.7(e) (iii) (F) requires the source to provide information on the usage of alternative fuel during stack testing, if such stack testing was conducted to satisfy Condition 7.1.7(a) (iii) in the CAAPP permit. Condition 7.1.7(a) (iii) is the requirement to perform stack testing when use of an alternative fuel is greater than 3 percent by weight of the fuel being burned. Condition 7.1.11(c) provides for operational flexibility to burn certain alternative fuels with certain examples of such alternative fuels. The phrase "alternative fuels," rather than "alternative fuel materials," is now used in these conditions in the issued permit. The change to Condition 7.1.7(e) (iii) (F) has been made in response to a comment to make it clearer that the coal boilers can only burn fuels and not waste materials. This is because these units are being permitted to operate as boilers and not as incinerators.

In Condition 7.1.11(c) (i), boiler cleaning residue is no longer identified as a material that may be burned in the boilers. This is because this material would now be considered a waste pursuant to USEPA's rules for Commercial and Industrial Solid Waste Incineration Units, 40 CFR 60 Subparts CCCC and DDDD.

In Condition 7.1.11(c) (ii), as clean lumber is identified as an alternative fuel that could be used to supplement coal, the definition of clean lumber at 40 CFR 60.2265 is now referenced. This makes clear, as provided by the referenced definition, that any such clean lumber could not include waste wood, i.e., "...wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote."

The changes to 7.1.11(c) are meant to provide greater clarity with respect to the alternative fuels addressed by the permit.

**Condition 7.1.9(b) (v)**

A new recordkeeping requirement has been added in the issued permit in new Condition 7.1.9(b) (v). It is appropriate that the permit require the source to

keep a record of the number of recycle pumps in service in each hour of operation. This is an appropriate requirement as it assists with the evaluation of whether the source is operating the control device properly in accordance with good operating practices. The change responds to a comment that suggested these records be included in the CAAPP permit.

**Conditions 7.1.9(i) (ii) (D) (I) , 7.6.9(d) (ii) (D) (I) and 7.7.8(c) (ii) (A)**

As the cause of a malfunction/breakdown was not addressed by the related recordkeeping in the draft permit, Condition 7.1.9(i) was revised, as it is appropriate that the cause for a malfunction/breakdown still be addressed in both the records and specified in the reports. The change responds to a comment identifying the need for reporting the cause of a malfunction/breakdown in Condition 7.1.10-3. Conditions 7.6.9(d) and 7.7.8(c) for the oil-fired auxiliary boiler and emergency generator were changed in a similar manner. These conditions now require that the records for a subject exceedance or incident include a detailed explanation for the probable cause. These changes are an outgrowth to the changes made in Condition 7.1.9(i) (ii) (D) (I) .

**Tables 7.1.13a and b**

The time period used by the Compliance Assurance Monitoring (CAM) plans for the coal boilers for the state PM emission standards have been revised. The plans addressed by the issued permit use opacity on a rolling three-hour period instead of on a three hour block average. This change serves to address the boilers on an hour-by-hour basis. This is provided with a rolling three hour period because a separate determination is made for each hour, based on the average of opacity for that hour and the two preceding hours.

These CAM Plans also only address the ESPs. They no longer address the wet flue gas desulfurization (WFGD) systems as control devices for PM emissions for the boilers, with an operational parameter for the WFGDs, i.e., number of recycle pumps in service. The change was made in response to a comment that questioned the validity of operating parameter, recycle pumps in service, to indicate proper operation of the WFGD system for control of PM.

**Condition 7.2.8(c)**

An additional Periodic Monitoring requirement has been included for the coal storage pile operation. This survey for the coal pile is now required to be conducted twice a month during warmer weather to address the potential for higher emissions. Monthly surveys are required at all other times. The survey is an observation of the coal pile operations for visible emissions in accordance with Method 22 for the duration of at least 10 minutes and/or Method 9 for the duration of at least 6 minutes. During warmer weather, May through November of each year, water evaporates more quickly and the exposed coal at the surface of a pile has increased potential for emissions. This change responded to concerns that the draft permit did not include compliance procedures to address 35 IAC 212.301.

**Condition 8.6.3(f)**

A change has been made in Condition 8.6.3(f), which addresses certain data that must be included in reports submitted to the Illinois EPA for required emission testing. In the issued permit, this condition has been reworded to make clear that both raw data and sample calculations must be provided for the various tests and analyses that are entailed in the testing of the emissions of emission units. With the new wording, this condition cannot be read to suggest that reports for emission testing must include either raw data or sample calculations, but not necessarily both. This change was made in response to a

comment that observed that such a reading was possible for the condition as worded in the draft permit.